

## STUDIES IN AUSTRALIAN ENTOMOLOGY.

NO. VII.—NEW GENERA AND SPECIES OF CARABIDÆ (INCLUDING SOME NOTES ON PREVIOUSLY DESCRIBED SPECIES, AND SYNOPTIC LISTS OF GENERA AND SPECIES).

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## SCARITINI.

*GEOSCAPTUS CRASSUS*, n.sp.

Robust, elongate, parallel, lævigata, lightly convex; prothorax transverse, obliquely narrowed on each side of base; anterior tibiæ tridentate.

Polished black. Head transverse ( $4.4 \times 7$  mm.), lightly convex; front depressed, strongly bi-impressed; the impressions distant from eyes, wide, shallow, converging slightly behind, curved outwards in front along course of clypeal suture, this impressed; clypeus longitudinally rugulose, anterior margin sloping lightly inwards on each side of labrum, emarginate behind labrum; eyes deeply set in orbits, not prominent; orbits tuberculiform behind eyes; the post-ocular processes two-thirds the size of eyes and nearly as prominent, abrupt behind. Upper surface of mandibles closely and finely rugulose. Prothorax transverse ( $5.5 \times 8.3$  mm.), widest near anterior angles, lightly convex; sides lightly rounded to anterior angles, straight and narrowing a little to posterior angles (these not marked), obliquely narrowed with a light sinuosity to base; basal angles not marked; base lightly sinuate in middle; anterior margin lightly sinuate on each side; anterior angles not marked or advanced; border narrow, reflexed, thicker on base; marginal channel wide and

sinuate in middle on base; median line strongly impressed. Elytra hardly wider than prothorax ( $15 \times 8.5$  mm.), parallel on sides, truncate on base; shoulders rounded; apex widely rounded; a narrow space along base and sides very finely and closely granulate; border reflexed; two punctures on apical fourth of each elytron placed longitudinally and widely apart. Prosternal episterna covered with minute granules. Anterior tibiæ widely incrassate, 3-digitate externally, one or two fine projections above the larger ones; intermediate tibiæ incrassate, external edge serrate, a strong external spur near apex.

Length 30, breadth 8.5 mm.

*Hab.*—Cooktown District, Queensland. (Sent to me by Mr. N. H. Gibson, from King's Plains Station, 28 miles S.W. from Cooktown).

This is the largest species of the genus yet described; in shape it is mid-way between *G. levissimus*, Chaud., and *G. cacus*, Macl.; being far less convex and cylindrical than *G. cacus*, but much heavier and more convex than *G. levissimus*. Its general resemblance is to *G. levissimus*, from which its greater convexity (especially of the abdomen) and larger size at once distinguish it.

#### EURYSCAPHUS TERRENUS, n.sp.

Oval, robust, convex, lævigata; elytra impunctate, the border reflexed and passing round the humeral angles.

Black, shining. Head smooth, subquadrate, transverse ( $6.3 \times 9.8$  mm.); frontal sulci deep, short, sub-parallel, turning outwards in front in a light sinuous course; pre-ocular sulcus lightly marked, short, not reaching eye; pre-ocular process small; eyes deeply set in orbits, edge of orbits thickened and obtuse below eye; one supra-orbital puncture on each side. Antennæ filiform, attenuate to apex. Prothorax short, widely transverse ( $6.5 \times 12$  mm.), convex; disc finely transversely rugulose; sides strongly and evenly rounded; anterior margin lightly bisinuate; base obsoletely and widely sinuate on each side, not lobate; anterior angles obtuse, very little advanced; posterior angles widely

rounded, but a little marked; border reflexed, widely so at posterior angles, thick and strongly reflexed on base; median line strongly impressed; a short arcuate transverse impression at end of median line near base; two marginal setigerous punctures on each side as usual in the genus. Elytra widely rotundate (14.6 × 14 mm.), widely rounded at apex, very convex; the base truncate on each side, widely and very lightly emarginate in middle; humeral angles almost rectangular, their summits rounded; border reflexed, widely so at humeral angles, passing round these on to the base on each side; margin wide, declivous on apical curve, flat and widely explanate at shoulders; a row of fine punctures (6) on base of each elytron; a row of fine punctures along margins from shoulders to apex. Anterior tibiæ bidentate; external ridge with three small projections above the larger teeth.

Length 32, breadth 14 mm.

*Hab.*—Murchison District, W.A. (In the collection of Mr. C. French).

I have not ascertained the sex of the single specimen on which the description above is founded, but have no doubt, from the shape of the elytra, that it is a ♂. Among the species known to me its nearest ally is *E. politus*, Sl., from the MacDonnell Ranges. Only the ♀ of *E. politus* has been recorded, and *E. terrenus* shows the following non-sexual differences from it: the prothorax is more transverse, more equally rounded on the sides, the anterior angles less advanced and more obtuse; and the orbits are less sharply prominent below the eye. It is also almost certain, judging from other species, that the elytra of the ♂ of *E. politus* will prove far more strongly emarginate at the base than those of *E. terrenus*. It has also a general resemblance to *E. minor*, Macl., and *E. concolor*, Sl.; from the former the wider prothorax, not the least lobate in the middle of the base, at once distinguishes it: while from the latter the prothorax less rounded behind, with the anterior angles less advanced, and the border less prominently upturned at the posterior angles; and the elytra less emarginate on the base with more rectangular humeral angles, &c., easily separate it.

## CARENUM FRENCHI, n.sp.

Robust, elliptic-oval, lævigata; prothorax transversely subquadrate, the posterior angles strongly marked; elytra oval, convex, impunctate, inflexed margins wide; abdomen convex; anterior tibiæ tridentate.

Black, shining, prothorax and elytra with a narrow metallic purple margin. Head smooth, subquadrate, transverse (5.3 × 8.1 mm.), convex across occiput; front depressed, vertical on each side above eyes; frontal sulci deep, lightly divergent backwards, turning outwards in front in a lightly marked linear course; clypeus truncate behind labrum with a short triangular projection on each side; pre-ocular sulcus short, deep, straight; pre-ocular process short, rounded externally; eyes not prominent; sub-orbital channel single, deeply impressed posteriorly; one supra-orbital puncture on each side. Mentum deeply emarginate; median tooth strong, prominent, triangular, strongly keeled in centre; a deep fovea on each side of keel at base. Second joint of antennæ shorter than third. Prothorax widely transverse (6.5 × 11 mm.), lightly convex, lightly declivous to base; sides subparallel, very lightly rounded; anterior margin lightly emarginate; anterior angles lightly and obtusely advanced; posterior angles rounded, but prominent and strongly marked; base short, bisinuate, roundly and widely produced backwards in the middle; the sinuosities on each side of the short basal lobe strong and wide; border widely reflexed on sides, very prominently so at posterior angles, narrower on base; marginal channel wide, narrowed at the posterior sinuosities, obsolete in middle of base; median line strongly impressed; basal declivity transversely striolate; two marginal punctures on each side as in *C. marginatum*. Elytra of same breadth as prothorax, oval (16 × 11 mm.), truncate on base between humeral angles, convex, strongly declivous to apex; sides subparallel (a little rounded in middle), rounded to shoulders; apex widely rounded; border reflexed, turned back at each humeral angle to form a short thick prominence; margin wide, most so (but not flat) on each side of apical curve; a row of four

strong punctures on base of each elytron ; a row of strong punctures along lateral margins, more closely placed in middle ; suture forming a deeply impressed channel. Prosternum lightly rugulose on each side near anterior margin of coxæ, widely impressed between coxæ, truncate on base ; two setigerous punctures on each side before base. Legs heavy : femora wide, compressed : anterior tibiæ tridentate externally, the upper tooth much smaller than the others ; external ridge with three small projections above the larger teeth ; inferior ridge strongly serrate, not extending to apex ; apical plate narrow, projecting strongly in front below tarsus ; intermediate tibiæ rough, strongly incrassate, a short light spiniform external spur at apex ; posterior tibiæ light, incrassate.

Length 30, breadth 11 mm.

*Hab.*—Gnarlbine, W.A. (Yilgarn Goldfields District). (In the collection of Mr. C. French).

This splendid species is a very distinct one, differing decidedly in facies from all the other members of the genus I have seen. Its place will be with *C. transversicollis*, Chaud., which it resembles somewhat in the shape of the prothorax ; the elytra are, however, proportionately longer and less rounded on the sides, which gives it a very different appearance.

#### CARENUM OPTIMUM, n.sp.

Elliptic-oval, robust, convex ; head subquadrate, suborbital channel single ; prothorax widely rounded at posterior angles, base lobate ; elytra ovate, bipunctate, inflexed margin wide : anterior tibiæ tridentate, posterior tibiæ light.

Head, legs and underparts of body black, prosternum green on each side near anterior margin ; prothorax black on disc (including middle of anterior margin) with wide brassy-green margins, inflexed margin of pronotum black with green reflections ; elytra brilliant green, becoming of a coppery tinge towards margins, disc with purple reflections in some lights, inflexed margin green. Head not large, subquadrate, transverse (4.5 × 6.6 mm.), depressed, lævigata ; frontal sulci deep, diverging strongly backwards,

curving sharply out in front in a strongly marked course; pre-ocular sulcus short, lightly marked; pre-ocular process small; eyes not deeply set in orbits, convex, rather prominent; two supra-orbital punctures on each side. Antennæ setaceous. Prothorax transverse (5.3 × 9 mm.); sides hardly narrowed to anterior angles, sub-parallel on anterior third; posterior angles widely rounded, not marked; anterior angles wide, obtuse, hardly advanced; base decidedly lobate, the lobe rounded behind, a strong sinuosity on each side of the basal lobe; border strongly reflexed, a little wider at anterior and posterior angles, narrower on basal lobe; marginal channel wide; median line strongly impressed; a well marked transverse line defining basal part; four marginal punctures on each side, the anterior and posterior as usual in the genus, the two intermediate ones placed about midway between them a considerable distance apart.\* Elytra oval (13.3 × 9.3 mm.), widest about middle, convex, rather depressed on disc, strongly declivous to apex and sides, abruptly declivous to peduncle; sides strongly rounded; base sub-emarginate between shoulders; humeral angles prominent; apex obtuse; border reflexed, more lightly so towards apex, thickened and up-turned at each humeral angle to form a strong prominent obtuse projection; margin wide, most so and flattened on apical curve; a strong discoidal puncture on apical third of each elytron, placed a little nearer the suture than the margin just behind beginning of apical declivity; four or five fine punctures in a curved row, with a larger puncture below them, on base of each elytron; a row of punctures along margin; suture forming a strong depression. Prosternum strongly impressed between coxæ, truncate on base; one or two setigerous punctures on each side just before base. Legs light: anterior tibiæ tridentate externally, the upper tooth small; external ridge with two light projections above larger teeth; inferior ridge strongly serrate, not extending to apex; apical plate projecting strongly below tarsus at apex.

Length 26, breadth 9.3 mm.

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\* It is probable the normal number of marginal punctures may prove to be three placed as in *C. odewahnii*, Casteln., &c.

*Hab.*—Murchison District, W.A. (In the collection of Mr. C. French.)

It resembles *C. habitans*, Sl., but differs conspicuously from that species in having the posterior tibiæ light, instead of thick and incrassate; the frontal sulci, too, are more divergent behind; there are two setigerous punctures above each eye instead of one, four setigerous punctures in the marginal channel of the prothorax instead of two, and the elytra are more rounded on the sides. Its place is with *C. elegans*,\* Macl., *C. odewahnii*, Casteln., and *C. speciosum*, Sl.; the slender posterior tibiæ and the anterior angles of the prothorax hardly advanced are sufficient to separate it from the two last of these; while the colour, and the more evenly oval elytra more obtuse at the apex are among the features distinguishing it from *C. elegans*. The specimen before me has the elytra covered with rows of very distinct punctures; but I have no doubt this is caused by long immersion in spirits of wine, and that the elytra are naturally smooth.

#### CARENUM COGNATUM, n.sp.

Elliptic-oval, robust, convex, lævigata; prothorax transverse, anterior angles porrect, posterior widely rounded, base shortly lobate; elytra oval, bipunctate, inflexed margins wide; anterior tibiæ tridentate.

Head, legs and under-surface black; prothorax widely margined with green, disc black in middle (including anterior margin) with purple reflections towards sides; elytra deep purple margined with green. Head subquadrate, transverse (3.9 × 6 mm.), lightly transversely impressed behind frontal sulci; front depressed; sulci deep, diverging strongly backwards, turning sharply outwards in front in a short lightly marked course; pre-ocular sulcus light; pre-ocular process weakly developed; eyes convex, projecting but not prominent; two supra-orbital punctures on each side. Prothorax widely transverse (4.8 × 8 mm.), convex, declivous to

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\* I cannot separate *C. campestre*, Macl., from *C. elegans*, Macl., and now regard it as a synonym of *C. elegans*.

base ; sides lightly rounded, the curvature to anterior and posterior angles equal ; anterior angles obtuse, lightly advanced ; posterior angles rounded, not marked ; base short, lobate, lobe short, rounded, a strong sinuosity on each side of the basal lobe ; border widely reflexed, hardly more prominent at basal angles ; marginal channel wide, narrower along base ; median line strongly impressed ; three marginal punctures on each side as in *C. odewahnii*. Elytra cordate-oval, hardly wider than prothorax (11 × 8.2 mm.), widest at about half the length, convex, abruptly declivous to peduncle ; sides lightly rounded ; base truncate ; shoulders rounded ; border reflexed, lightly folded back (not prominently upturned) at humeral angles ; margin widely explanate on apical curve ; a strong discoidal puncture on apical third of each elytron, placed about midway between suture and margin just behind beginning of apical declivity ; a few irregularly placed punctures on base of each elytron ; a row of umbilicate punctures along margin. Prosternum widely impressed between coxæ, truncate at base ; two setigerous punctures on each side before the base. Legs light ; anterior tibiæ tridentate ; inferior ridge not strong, not extending forward beyond second external tooth ; apical plate wide, projecting lightly and obtusely at apex below tarsus.

Length 22.5, breadth 8.2 mm.

*Hab.*—Queensland. (Brought from Queensland by Mr. Lau, probably from the Darling Downs District).

This species resembles *C. splendens*, Casteln., so closely that it requires a careful examination to distinguish it. The head is similar ; the prothorax is differently shaped, being wider in front ; this is caused by the sides being more parallel, the widest part being about midway between the anterior and posterior angles, and the curvature to the anterior angles almost equal to that of the posterior ; in *C. splendens* the widest part of the prothorax is towards the posterior angles, the sides narrowing roundly to the anterior angles ; the curvature of the sides from the posterior angles to the short basal lobe is shorter and more decided in *C. cognatum* than in *C. splendens*. *C. interioris*, Sl., is another



species that, from the description, might be mistaken for *C. cognatum*, but it has the prothorax shaped as in *C. transversicolle*, Chaud., with marked and prominent posterior angles.

CARENUM GRACILE, n.sp.

Elliptic-oval, depressed, levigate; head transversely impressed across vertex; suborbital channel to receive antennæ wide, short, the median ridge hardly indicated; gulæ defined from genæ; prothorax transverse, lightly narrowed behind posterior angles, base not lobate, widely sinuate in middle; elytra short, 4-punctate, inflexed margin wide; anterior tibiæ bidentate.

Head, prothorax and underparts shining black; prothorax with faint narrow violet margin; elytra of a splendid metallic violet colour, becoming steel blue towards sides and on inflexed margins. Head light (2.5 × 3.5 mm.), front smooth, declivously depressed; frontal sulci not deeply impressed, short, curved, their posterior part hardly stronger than their anterior part; a well-marked transverse impression crossing the vertex a little behind the posterior supra-orbital puncture; pre-ocular sulcus short, wide, lightly impressed; pre-ocular process small; eyes hemispherical, projecting; two supra-orbital punctures on each side. Prothorax transverse (3.2 × 4.6 mm.), lightly rounded on sides, narrowed rather obliquely behind posterior angles; base wide, lightly emarginate; anterior margin emarginate; anterior angles lightly advanced; border narrow, reflexed, thicker and more strongly reflexed on base, thus causing a light sinuosity on each side just before the base; median line strongly impressed; a strong curved transverse impression a little before the basal margin; three marginal punctures on each side as in *C. anthracinum*. Elytra short, ovate, wider than prothorax (7 × 5 mm.); sides strongly rounded; base truncate between the shoulders, these rather prominent; apex widely rounded; border reflexed, thickened and lightly turned back at humeral angles to form a short erect projection; margin wide on apical curve; two discoidal punctures on each elytron, the anterior a little distance (about 0.8 mm.) behind the humeral

angle, the posterior on apical third just at beginning of apical declivity about midway between suture and margin; two punctures on base of each elytron near shoulder; a row of widely-placed punctures along margin. Prosternum strongly impressed between coxæ. Legs light; anterior tibiæ bidentate; apical plate shortly but decidedly produced at apex below tarsus.

Length 14·5, breadth 5 mm.

*Hab.*—Lower Murray. (Sent to me by Mr. C. French, as coming from the Lower Murray—Mildura or Wentworth District).

This beautiful little species is allied to *C. anthracinum*, Macl.; its affinity being to *C. cyanipenne*, Macl., from which its wider form, and the elytra entirely of a beautiful metallic purple, with bluish reflections, readily distinguish it.

#### EUTOMA VIRIDICOLOR, n.sp.

Robust, elongate, cylindrical; head large, the suborbital channel short, divided into two equal parts by a wide convex ridge; prothorax hardly broader than long, anterior angles projecting; elytra convex, emarginate between humeral angles, 4-punctate, border thick, inflexed margin narrow behind first ventral segment.

Head black in front, greenish behind for about as far forward as the eyes; prothorax green, a narrow space along anterior margin black; elytra green, shining, the thick border black, inflexed part blackish-green; under parts of prothorax black with the anterior part green towards the sides; underparts of body and legs black; third, fourth, and fifth ventral segments with green reflections. Head large (4·2 × 5·6 mm.), convex; frontal sulci deep, strongly divergent backwards, turning sharply out in front in a faintly-marked course not attaining anterior margin; a strong foveiform puncture on each side near their out-turned anterior course; clypeus very feebly trisinate between lateral teeth; pre-ocular sulcus narrow, well-marked, continued backwards above eye; pre-ocular process large, rounded externally; eyes deeply sunk in orbits, not prominent. Mandibles short. Antennæ moniliform,

short, thick, lightly incrassate, second joint not shorter than third, apical joint obtuse. Prothorax very little broader than head, a little broader than long ( $5.5 \times 6$  mm.), convex, sides parallel on anterior half, gently and roundly narrowed on each side behind posterior marginal puncture; base widely rounded; anterior margin truncate between anterior angles; these obtuse, projecting shortly but decidedly; posterior angles not marked; border narrow, wider towards anterior angles, more strongly reflexed behind posterior marginal puncture, lightly sinuate on each side of base, much thicker on base; marginal channel narrow; median line strongly impressed; basal part short, depressed below disc, defined anteriorly by a strong transverse linear impression; two marginal punctures on each side, the anterior a little behind anterior angles, the posterior at the place of the posterior angles. Elytra a little wider than prothorax ( $11.5 \times 6.3$  mm.), widest about middle, a little narrowed to shoulders, convex, strongly declivous on sides and apex, abruptly declivous to peduncle; base widely emarginate; shoulders prominent; apex obtuse; border very narrow on anterior half of sides, becoming thick and convex on apical third, thickened and upturned at humeral angles to form a short obtuse prominence; two discoidal punctures on each elytron, the anterior a little distance (hardly 2 mm.) behind humeral angles, the posterior at beginning of apical declivity; a row of five strong punctures on base of each elytron; a row of separate umbilical punctures along sides, these more closely placed towards shoulders; inflexed margins very narrow and parallel behind first ventral segment. Four anterior legs strong, posterior light: anterior tibiae bidentate; intermediate incrassate, serrate, with an acute strongly projecting external spur at apex.

Length 22, breadth 6.3 mm.

*Hab.*—Northern Territory of South Australia. (In the collection of Mr. C. French).

This is one of those species that serve to break down the boundaries dividing *Eutoma* from *Carenum*. It is a very distinct species, the affinity of which is, on the whole, more towards *C. quadripunctatum*, Macl., than to any other Carenide known

to me ; but its head is larger than in that species, and its prothorax more elongate ; while the emarginate base of the elytra gives that part of the body a very different appearance from what it has in *C. quadripunctatum*, which has the elytra almost quite oval, the base being shortly truncate behind the peduncle ; the legs are as in *C. quadripunctatum*. It is probably also allied to *C. viridissimum*, Macl., but is a much heavier and more robust insect.

#### B E M B I D I I N I .

##### BEMBIDIUM MASTERSI,\* n.sp.

Narrow, elongate, lightly convex ; mandibles long, acute, decussating ; prothorax subcordate ; elytra strongly and evenly striate, the striae simple, third interstice bipunctate.

Head and prothorax blackish-green, shining ; elytra testaceous, the basal half of the first interstice, and a spot of varying width and size on the disc of each elytron situated between the punctures of the third interstice, of a dark hue with greenish reflections ; legs and antennae testaceous. Head large, very finely shagreened ; front depressed, somewhat rugulose, impressed on each side ; the impressions extending forward to anterior margin of clypeus, their course sub-parallel, a little sinuous ; clypeus transverse, anterior margin truncate. Penultimate joint of maxillary palpi elongate, incrassate. Antennae long, rather slender, lightly incrassate. Prothorax very little wider than head with eyes (1.1 × 1.4 mm.), subcordate, convex, declivous posteriorly, evidently narrower across base than across apex, finely shagreened towards sides, smooth on disc ; sides lightly rounded on anterior part, very little narrowed to anterior angles, strongly sinuate posteriorly and meeting the base at right angles ; anterior margin very lightly emarginate ; base rather roundly truncate ; anterior angles prominent, rather advanced ; basal angles sub-rectangular, not prominent or acute ; lateral border narrow, reflexed ; a short

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\* While this paper has been passing through the press I have noticed a reference in Trans. Ent. Soc. N.S.W., I., p. xvii, probably relating to this species, and if so, showing that as long ago as 1863 Sir William Macleay had collected it and intended to name it *B. flavescens*.

rather wide impression on each side of base ; spaces between these impressions and basal angles gently acclivous, not elevated or carinate ; space across peduncle between the impressions depressed and defined by a distinct transverse line ; median line distinctly marked. Elytra sub-oval ( $2.8 \times 1.6$  mm.), truncate at base, widely rounded at apex, lightly convex ; sides sub-parallel, very lightly rounded ; striae simple, strongly impressed, fifth joining marginal channel at humeral angle ; striole at base of first interstice strongly impressed ; interstices convex ; anterior puncture of third interstice a little before the middle, posterior just before the apical declivity ; marginal channel wide, with four punctures on anterior third ; lateral border strongly reflexed.

Length 4.5-5, breadth 1.4-1.6 mm.

*Hab.*—Port Jackson.

This seems a thoroughly isolated species among the Australian Bembiides ; I know of none resembling it. The decussating mandibles, the head flattened and wide across the clypeus and between the eyes, and the prothorax with prominent advanced anterior angles are quite different from any other Australian Bembiide I have seen ; and my want of knowledge of foreign species prevents me from suggesting any extra-Australian affinities.

I dedicate it to the veteran Australian naturalist,—Mr. George Masters, Curator of the Macleay Museum, from whom I have received specimens ; and who informs me it is found near the water's edge in the bays and inlets of Port Jackson, but that he has never taken it on any beach exposed to the ocean.

#### BEMBIDIUM RIVERINÆ, n. sp.

Robust, elongate-oval ; prothorax cordate, sides sinuate behind ; elytra convex, strongly punctate-striate ; upper surface of head and prothorax and the interstices of the elytra shagreened.

♂. Bronzy or brassy green, shining ; apex of elytra and legs pallid, apex of femora, base and apex of tibiæ, and tarsi fuscous ; antennæ fuscous, basal joint pallid ; under-surface black or

piceous. Head with frontal impressions diverging strongly backwards as far as back of eyes; the eyes hemispherical, very prominent. Prothorax very little wider than head with eyes, transverse ( $1 \times 1.3$  mm.), cordate, convex, widest before the middle (at anterior marginal puncture), evidently narrower across base than in front, truncate in front and behind; sides a little obliquely (hardly roundly) narrowed in front to anterior angles; roundly narrowed behind anterior marginal puncture, strongly sinuate posteriorly and meeting the base at right angles; basal angles acute, prominent; lateral border narrow, sharply reflexed; a deep fovea on each side near the basal angle, this fovea margined externally by a short lightly raised carina joining the border at the basal angle; median line linear, distinctly marked. Elytra ovate ( $2.75 \times 1.8$  mm.); sides lightly rounded, a little widened behind the shoulders; apex evenly and widely rounded; shoulders rounded, not marked; seven strongly punctate but lightly impressed striae on each elytron, exclusive of the marginal stria and the scutellar striole; interstices flat, third lightly bipunctate on disc; scutellar striole long, punctate; marginal channel lightly punctate behind shoulders; border finely reflexed, a little thickened and turned back to form a slight prominence at base of fifth stria.

Length 4.475, breadth 1.82 mm.

*Hab.*—Urana District, N.S.W.

The female is rather darker coloured than the male, both in the green, and the pale apical marking of the elytra. The pale part of the elytra extends round the apex a little way along the sides and is about the width of the lateral declivity. This seems a very distinct species among the described species of Australian Bembidiides; comparing it with *B. jacksoniense*, Guér.,\* which it resembles in the colour of the elytra, and in company with which I have taken it; its greater size and very differently shaped prothorax are apparent and conspicuous differences. I found it

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\* *Bembidium jacksoniense*, Guér., (Voy. Coquille, 1830, p. 61) undoubtedly = *subviride*, Macl., and *B. ocellatum*, Blkb.

in great numbers along the edge of permanent fresh water in the Urana District in April, 1892.

TACHYS MURRUMBIDGENSIS, n.sp.

Elongate; prothorax subcordate; elytra depressed, finely punctate-striate; head, prothorax and interstices of elytra sparsely and very minutely punctulate.

Piceous black. Head smooth; front strongly bi-impressed; the impressions parallel, extending to anterior margin of clypeus; the clypeus truncate, anterior part hollowed out between frontal impressions; eyes convex, not very prominent. Antennæ moniliform, strongly incrassate. Prothorax subcordate, lightly transverse, widest before the middle, evidently narrower across base than in front; base very widely sub-lobate; sides rounded, shortly sinuate before the base; basal angles acute and very prominent; lateral border narrow; a transverse impression on each side near basal angle defining basal part of prothorax; lateral foveæ of base obsolete; median line very lightly impressed. Elytra a little wider than prothorax ( $1.2 \times 0.75$  mm.); sides subparallel; base emarginate; shoulders prominent, round; apex evenly and widely rounded; five finely punctulate lightly impressed striæ (exclusive of marginal striæ) on each elytron, first, second, and fifth reaching base, third and fourth finer than others not extending to base, first flexuous and approaching very near suture towards base, fifth strongly impressed near base; interstices flat, fourth with two setigerous punctures uniting the third and fourth striæ (the anterior puncture placed at the beginning of the striæ, the other about half way between it and the apex), third with a lightly impressed puncture on posterior declivity; scutellar striole wanting; marginal channel strongly impressed with a few punctures behind shoulders.

Length 1.75, breadth 0.75 mm.

*Hab.*—Narrandera, N.S.W. (I took two specimens running near the edge of the water on a sand-bank in the Murrumbidgee at Narrandera, 16th March, 1893.)

I am in some doubt as to the position of this species, but owing to the oblique termination of the anterior tibiae and the well marked striolæ of the apical declivity of the elytra have placed it in *Tachys*. It seems a thoroughly isolated species; the high-shouldered, parallel elytra are among its most conspicuous features. The inner portion of the usual apical striole is very distinctly marked, though it does not join the sutural stria; between this short stria and the marginal channel is another short deep stria, on the apical declivity, which extends round the apex and joins the sutural stria. The penultimate joints of the maxillary palpi are greatly swollen; the last joint is very small, being a mere projecting spike.

TACHYS MITCHELLI, n.sp.

Oval, robust, convex; prothorax short, sides not sinuate before base, posterior angles not prominent; elytra widely oval, striate-punctate, posterior declivity smooth.

Testaceous (disc of elytra sometimes more or less infuscate), legs pallid. Head convex, smooth; front with two strong elongate narrow impressions converging in front, eyes convex, prominent; penultimate joint of maxillary palpi very thick and inflated. Antennæ moniliform, lightly incrassate. Prothorax short, transverse, convex, smooth, about as wide (not narrower) across base as across apex; sides rounded in front, narrowed behind, not sinuate before basal angles; anterior angles widely rounded, not marked; posterior angles not prominent, acute at summit; base cut obliquely to peduncle on each side behind posterior angles, truncate across peduncle; lateral border wide in front, narrower towards posterior angles; median line obsolete; a lightly marked transverse line across base near margin; the lateral foveæ of the base wide and weakly marked. Elytra greatly wider than prothorax, convex, oval, truncate on base; shoulders rounded, not marked; six rows of punctures on each elytron (exclusive of marginal stria), sutural stria entire, simple on posterior declivity, others successively shorter towards sides, seventh wanting, eighth (marginal) punctate, the punctures inter-



rupted a little behind shoulders; lateral border wide, reflexed, with a well marked sinuosity on each side towards apex; recurved part of sutural stria shortly but strongly marked near apical sinuosity of border.

Length 1·9, breadth 0·9 mm.

*Hab.*—Urana District, N.S.W.

This little species much resembles *T. flindersi*, Blkb., at a casual glance; but it differs in the shape of the prothorax, which in *T. flindersi* is very strongly transversely impressed behind, and has the sides decidedly sinuate before the base, the basal angles being prominent; the elytra, too, in *T. flindersi* are narrower, with the humeral angles more prominent, and the puncturation finer.

#### F E R O N I N I .

In his Essay on the Classification of the Carabidæ, published in the Trans. Am. Ent. Soc., ix, 1881, which I believe is the latest comprehensive work on the subject, Dr. G. H. Horn has discarded Lacordaire's tribal name *Feronides* in favour of *Pterostichini*, though without giving his reasons for so doing. I prefer to retain the name adopted by Lacordaire for the tribe, because it is more familiar, because I do not know Dr. Horn's reasons for changing it, and because I would associate under it a far more extensive group of genera than Dr. Horn places in his *Pterostichini*.

In addition to the genera tabulated and mentioned below as allied to *Pterostichus*, I would include in the *Feronini*, *Leirodira*, *Cyrtoderus*, *Delinius*, *Lesticus*, *Mecynognathus*, *Morphnos*, *Nuridius* and *Catadromus*; and I believe the limits of the tribe should be further extended to take in the *Morionini*, which seem to me to be separated from the *Feronini* on very artificial grounds, *Catadromus* may be considered a genus connecting the two tribes, it having the weak basal border of the elytra, and four glabrous joints of the antennæ which characterise the *Morionini*.

After the death of Baron de Chaudoir, the elucidation of the Australian *Feronini* remained in Australian hands till 1891, when M. Tschitschérine entered the lists with a short but

comprehensive essay on the Feronides of Australia and New Zealand.\* It is to be regretted that M. Tschitschérine overlooked, or at least ignored, all the work done by de Chaudoir and Macleay among the Australian Feronides subsequently to de Chaudoir's original Essay on the subject in 1865, and thereby rendered his paper of almost no practical value. His classification of the genera, or more properly the sub-genera, is very crude, and his want of knowledge of de Chaudoir's later work makes it worthless. As the paper is published in a foreign periodical, hardly to be met with in Australia, I take the present opportunity of noting all that is of interest in it.

(1). Four species are described as new, viz :—

*Holcopsis convexidorsis*, from New Zealand (unknown to me); *Rhabdotus chandoiri*, from Tasmania (= *R. floridus*, Bates); *Rhytisternus levidorsis*, from Brisbane (?) (= *Pacilus levis*, Macl.); *Chlavioidius irideomicans*, from Moreton Bay (which from comparison of descriptions, seems to me *Ch. paciloides*, Chaud.)

(2). Three new subgenera are proposed, viz :—*Castelnaulia*, *Pseudoceneus*, and *Paciloidia*; the first is proposed for *Homalosoma nitidicolle*, Casteln., and seems an entirely needless division; *Pseudoceneus* is founded on *Pterostichus holomelanus*, Germ., a species that I place in *Simodontus*; *Paciloidia* is intended to receive *Pacilus iridescens*, Casteln., which Chaudoir has placed in the American genus *Loxandrus*; should it ultimately prove that the Australian species thus referred to the latter do not actually belong to that genus, then *Paciloidia* may come in.

(3). Our knowledge of the synonymy of the described Australian fauna is further increased by *Catadromus cordicollis*, Motsch., being placed as a synonym of *C. lacordairii*, Boisd.; and *Orthomus antipodius*, Motsch., as a synonym of *Simodontus australis*, Dej. In these conclusions M. Tschitschérine may be followed with confidence, as he is situated so as to be able to speak with more certainty than would be possible for any Australian worker.

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\*Hor. Soc. Ent. Ross. 1891, T. xxv.

(4). He points out that Gemminger and Harold's Catalogue contains an error in saying the genus *Parhyppates*, Motschulsky, is Australian; this error has also been adopted by Mr. Masters in his Catalogue of the Coleoptera of Australia.\*

MECYNOGNATHUS MACLEAYI, n.sp.

Black, shining; elytra opaque with a shining margin. Robust, body pedunculate; prothorax short, narrowed behind; elytra ovate, widest near base, gradually narrowed backwards; convex transversely and longitudinally, not bordered on base; shoulders rounded. Male without squamulose tissue beneath anterior tarsi. †

♂ Head very large (7 × 7.5 mm.), convex, smooth; front with a strongly marked uneven wide impression on each side extending on to the clypeus; clypeal suture distinct between the frontal impressions; clypeus longitudinally impressed in middle, lightly emarginate behind labrum; eyes convex, not prominent; post-ocular prominences large, almost equalling the eyes, not abruptly declivous behind; a prominent ridge extending forward from eyes above base of antennæ; genæ greatly inflated below antennæ. Mandibles long (about 6 mm.), decussating. Labrum subquadrate, strongly emarginate, 6-setose in front; anterior angles rounded. Mentum with short broadly obtuse lobes; median tooth short, bifid. Palpi slender, truncate at apex; labial with penultimate joint long, narrow, 2-setose in front; apical joint subsecuriform. Antennæ filiform, compressed; three basal joints glabrous, first thick, longest (not as long as second and third together), with an irregular longitudinal impression and a setigerous puncture on upper side. Prothorax heavy, a little wider than head (6 × 9 mm.), ‡

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\*I would also note that *Homalosoma levicolle*, Brullé, and *H. striaticolle*, Brullé, though placed by Mr. Masters in his Australian list, are said by Brullé (Hist. Nat. Ins. iv. 364) to be from Madagascar.

† At the time of writing this description my single male specimen has lost the anterior tarsi, but I had formerly observed and noted that they were without squamulose tissue beneath—but without noting their shape.

‡ The length of the prothorax in the middle is 6 mm.; the length from anterior to basal angle is 7 mm.

widest towards the front (at anterior marginal puncture), rounded on anterior half, narrowed behind, strongly declivous between lateral basal impressions; a narrow flattened space near base across peduncle; anterior margin lightly emarginate; base almost truncate on each side, strongly emarginate across the peduncle; anterior angles rounded, hardly advanced; basal angles subrectangular, rounded at their summit; border thick, reflexed (more widely so near base), extending along base on each side to peduncle; marginal channel wide, shallow; median line lightly impressed; a strong short deep impression on each side of the base extending obliquely outward in front; a broad flattened space between these impressions and the basal angles; anterior marginal puncture placed in marginal channel, posterior on edge of lateral border a little before the basal angle. Elytra ovate, not wider than prothorax ( $13.5 \times 9$  mm.), convex, lightly declivous to peduncle and apex; base rounded on each side between humeral angle and peduncle; apex evenly rounded; striae lightly impressed, eighth obsolete, a row of fine punctures along its course; interstices raised, third and seventh more prominent, third and fifth subcarinate, seventh carinate; space between eighth and margin shining; border extending from peduncle to apex, widely reflexed behind shoulders, more narrowly so posteriorly, its course not interrupted posteriorly by edge of inflexed part of elytra. First ventral segment attaining metasternum in a sharp point, three last smooth, a puncture on each side of anus. Legs light: posterior trochanters unipunctate, elliptic, obtuse at apex.

Length 29, breadth 9 mm.

♀. Resembling the ♂, but with the head larger ( $7 \times 8.5$  mm.); prothorax wider ( $6.25 \times 9.75$  mm.); elytra ( $15.5 \times 10$  mm.), a little less convex (both transversely and longitudinally), less narrowed behind, more widely rounded at apex. First joint of anterior tarsi about as long as two succeeding ones together.

Length 30, breadth 10 mm.

*Hab.*—North Queensland (Cape York?); ♂ and ♀ in my collection.

Comparing the ♀ of this species with that of a North Queensland species which I take to be *M. dilaticeps*, Chaud., the following differences may be noted: In *M. macleayi* the head is broader; the eyes and the post-ocular prominences are much less prominent, the latter being much less abruptly terminated behind; the prothorax is narrower towards the base and sinuate before the basal angles; the elytra are much narrower and less widely rounded at apex (those of *M. dilaticeps* measure  $16 \times 11.4$  mm.), the interstices are more raised—especially the seventh—in *M. dilaticeps* the third and fifth are more prominent than the seventh, but none is as sharply defined as in *M. macleayi*. The four posterior tibiae are more spinose in *M. dilaticeps*, and the posterior trochanters are more bluntly rounded at the apex. Both species have the abdomen setigero-punctate behind the posterior coxæ—(this feature is also present in the ♂ of *M. macleayi*, but to a much less marked degree). *M. dilaticeps* and *M. macleayi* are very distinct from one another, and both are very different from that remarkable insect, *Mecynognathus dameli*, Macl., which is the type of the genus.

#### THE PTEROSTICHUS GROUP.

The Feronides which I now propose to treat of, under the name of “The *Pterostichus* Group,” may be defined briefly, as including all those presenting a combination of the following characters:—

Mandibles without a setigerous puncture in the groove (scrobe) on outer side. Elytra bordered on base; a strong plica on inner surface near edge, the lateral margin usually interrupted on each side of apical curve where the plica joins it.\* Mentum with a distinct median tooth or projection.

According to Dr. Horn another feature of great classificatory importance characterises the group, viz., the contiguity of the posterior coxæ; but the genus *Homalosoma* is aberrant in this

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\* Dr. Horn's words are (*l.c.* p. 137) “margin strongly interrupted posteriorly and with a well marked internal plica,” but I think a slight modification is necessary; for, in the genus *Homalosoma* the margin is not interrupted posteriorly,” though the plica is as strong as usual

respect, for, though in most of the species the posterior coxæ are in close proximity, or even contiguous, *H. cyaneum* and some others have them distinctly separated.

*Table of the principal Genera of Australia allied to Pterostichus.*

- I. Abbreviated stria of elytra on base of first interstice (ventral segments never transversely sulcate).
- A. Elytra with interstices costate or carinate.....*Homalosoma*.
- AA. Elytra with interstices neither costate nor carinate.
- a. Legs short; posterior femora broadly dilatate towards apex and strongly channelled below.....*Prionophorus*.
- aa. Posterior femora not dilatate towards apex, or channelled below.
- b. Third interstice of elytra punctate.
- c. Apterous, punctures of third interstice of elytra not (or very rarely) near second stria... ..*Pterostichus*.
- cc. Winged; third interstice of elytra 3-punctate, the basal puncture on the course of the third stria, the two hinder ones on the course of the second stria.....*Leptopodus*.\*

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\* The genus *Leptopodus* appears never to have been diagnosed by its author; it was proposed by de Chaudoir (Ann. Mus. Civ. Genov. 1874, vi., p. 600) to receive three species, viz., *Pterostichus sollicitus*, Erich., *P. holomelanus*, Germ., and *Feronia (Pacilus) iridipennis*, Casteln., which he placed under it without comment. The Rev. T. Blackburn (P.L.S.N.S.W., 1889 (2), iv., p. 730), says, *Leptopodus* was "proposed by the Baron de Chaudoir for *Pterostichus holomelanus*, Germ." and he then proceeds to give the characters distinguishing that species as diagnostic of the genus; adding the following note:—"I am unable to find any structural characters to distinguish this genus from *Simodontus* except the strong declivity of the median tooth of the mentum and the strongly sulcate tarsi." I do not know why Mr. Blackburn says *Leptopodus* was founded for *P. holomelanus*, but if this be the case, it should merge with *Simodontus*; the form of the median tooth of the mentum and the sulcus of the external side of the joints of the tarsi being characters on which little reliance can be placed in the *Feronini*. Only two of the species mentioned by de Chaudoir as belonging to *Leptopodus*, viz., *Pterostichus holomelanus*, and *Fer. (Pacilus) iridipennis*, are known to me; I think the latter should be considered the type of the genus, in which case it will be very distinct from *Simodontus*, and as well characterised as any Australian genus of the *Feronini*. It can be distinguished readily by the characters given in the present table.

*bb.* Third interstice of elytra impunctate..... *Chlenisidius*.

II. Abbreviated stria of elytra wanting, or on base of second interstice.

B. Third interstice of elytra punctate.

*d.* Elytra with second and third interstices very narrow and placed in a deep furrow between first and third, and third and fifth, interstices respectively..... *Notolestus*.

*dd.* None of the elytral interstices abnormally narrow, or placed in a furrow between larger interstices.

*e.* Ventral segments not transversely sulcate.

*f.* Apterous, elytra with humeral angles dentate.... *Zoedera*.

*ff.* Winged, elytra with humeral angles rounded *Loxandrus*.

*ee.* Ventral segments transversely sulcate.

*g.* Punctures of third interstice of elytra all situated along course of third stria..... *Simodontus*.

*gg.* Punctures of third interstice of elytra (excepting one on basal third, if present, near third stria) situated near course of second stria.

*h.* Third interstice of elytra 3-punctate (the puncture on basal third situated near third stria)..... *Prosopognus*.

*hh.* Third interstice of elytra 2-punctate (without a puncture on basal third); mesosternal episterna elongate..... *Hormochilus*.

*hhh.* Third interstice of elytra unipunctate on posterior third; mesosternal episterna short..... *Setalimorphus*.

BB. Third interstice of elytra impunctate.

*i.* Ventral segments not transversely sulcate (labrum truncate).

*j.* Prosternal episterna longitudinally striolate, striae of elytra simple..... *Rhytisternus*.

*jj.* Prosternal episterna smooth; striae of elytra punctate (size small)..... *Pediomorphus*.

ii. Ventral segments transversely sulcate.

k. Elytra striate on disc, smooth towards sides, rounded at humeral angles.....*Darodilia*.

kk. Elytra striate on sides, as well as on disc, dentate at humeral angles.

l. Head large, not transversely impressed across vertex.....  
.....*Cyphosoma*.

ll. Head small, transversely impressed across vertex (penultimate joint of maxillary palpi much shorter than last).....*Setalis*.\*

In addition to the genera noted above, the following, belonging to the *Pterostichus* group of genera, have been omitted, viz., *Abacetus*, *Eurystomis* and *Nelidus*; *Abacetus*, because, having only a specimen of one species, I feel unable to deal with it; *Eurystomis* and *Nelidus* because they are unknown to me in nature.

The table above merely indicates what appear to me the most obvious points of distinction between the genera mentioned. Baron de Chaudoir, the author of nearly all these genera, though he bestowed names upon them, regarded them merely as sub-genera (or sub-divisions) of the central genus *Feronia*, and apparently for that reason multiplied them in what seems a very random way; unfortunately he never tabulated his genera and sub-genera, and has thus thrown upon those who have followed him the task of determining the relative value of his divisions. In the present classification I have merged in *Pterostichus* the sub-genera *Notonomus*, *Sarticus*, *Rhabdotus* and *Coronocanthus*, because it has seemed impossible to maintain them satisfactorily

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\* *Setalis niger*, Casteln. = *Loxogmus obscurus*, Sl. The species Sir William Macleay calls *S. niger*, Cast., in his paper on "The insects of Gayndah" (Trans. Ent. Soc. N.S.W. 1873, Vol. II.), is a species of *Homochilus*, as I have recently found by seeing the specimens in the Australian Museum, from Gayndah, so named by him. I have seen a number of specimens in the Howitt Collection at the Melbourne University, labelled "*Setalis niger*, Casteln.," and they are identical with the species on which I founded the genus *Loxogmus*. It may be noted that I have said there is but one lateral basal impression on each side of the prothorax, while de Castelnau has said there are two; however, the external one is feebly developed, and was obsolete in my unique specimen.



when the characters on which they are founded are submitted to careful and critical investigation; for the same reasons I have been compelled to merge *Nurus*, *Trichosternus* and *Loxodactylus* in *Homalosoma*, and *Ceneus* and *Ophryosternus* in *Prosopognus*. Further, I may be permitted to add that, to my mind the following seem entitled to take full rank as genera, viz., *Homalosoma*, *Prionophorus*, *Notolestus*, *Zoedera*, *Loxandrus*, *Phytisternus*, *Pedimorphus*, *Darodilia*, *Cyphosoma* and *Setalis*; if this course be adopted some alterations in nomenclature made by de Chaudoir will have to be rescinded and the original names reverted to.

#### Genus HOMALOSOMA.

In the present state of my views on the classification of the *Carabidae*, I feel compelled to unite in the genus *Homalosoma* all the *Feronides* of the Australian Continent which are characterised by having the elytra with a basal border and with the interstices between the striae costate. In *Homalosoma* the median tooth of the mentum may have the apex either rounded or excised, but this is a character that seems of little, if any, value. *Homalosoma* as here constituted, agrees with de Castelnau's ideas of its limits, and includes Motschulsky's genus *Nurus*, de Chaudoir's genus *Loxodactylus*, and part of the latter author's genus *Trichosternus*. *Nurus* seems only to be separated from *Homalosoma* by the ♂ having the anterior tarsi with two basal joints, instead of three, dilatate and squamulose below, a character that I cannot recognise as of more than specific importance. *Trichosternus* seems a genus of doubtful value; de Chaudoir appears to have regarded the presence of setae on the base of the prosternum as a sufficient reason for placing any *Feronide* in *Trichosternus*, though latterly, as he admitted the validity of the genus *Nurus*, he must have thought the character of less weight; as far as I can judge it is a feature of merely specific value, and I would remove from *Trichosternus* all the species with costate elytral interstices, placing them in *Homalosoma*; this would exclude *Trichosternus* from the Australian fauna; unless *Feronia regalis*, Casteln., which has the base of the prosternum with a few setae,

be regarded as a species of *Trichosternus*. *Loxodactylus* is a more distinctive group than the other two, but I cannot find sufficient grounds for constituting it a genus separate from *Homalosoma*.

*Synoptic Table of the Species of Homalosoma known to me.*

- I. Basal border of elytra forming a dentiform projection at humeral angles.
- A. Prosternum with base setigero-punctate; mesosternum glabrous.  
 Head and prothorax of a splendid brassy green colour.  
*H. imperiale*, Sl.  
 Head black, prothorax only metallic towards margin.....  
 ..... *H. breve*, Motsch.
- B. Prosternum (at base) and mesosternum setigero-punctate; colour black.....  
 ..... *H. renardi*, Chaud.; *H. vigorsi*, Gory; *H. alternans*, Sl.\*  
 Black, prothorax and elytra margined with green.....  
 ..... *H. angulosum*,† Chaud.
- C. Prosternum and mesosternum glabrous.
- d. Elytra with 3rd, 5th and 7th interstices strongly carinate, others weakly developed.
- e. Ninth interstice of elytra obsolete, merged with margin.  
 Elytra obovate, widely rounded at apex; a wide light sinuosity at each side of apical curve.....  
 ..... *H. viridescens*, Casteln.  
 Elytra oval, narrow at apex, apical curve without any sinuosity..... *H. wilsoni*, Castln.
- ee. Ninth interstice of elytra narrow, plainly indicated on posterior third (elytra strongly declivous behind, apex widely rounded without any sinuosity; prothorax of a brassy colour)..... *H. nitidicolle*, Casteln.

\*For differences between these three species see description of *H. alternans*, p. 423.

† *Hab.*—Richmond River, N.S.W.; its exact habitat has not before been recorded.

- dl.* Elytra with the interstices equal, or sub-equal.
- f.* Ninth interstice of elytra merged with margin, colour of upper surface purple.....*H. cyaneum*, Casteln.
- ff.* Ninth interstice of elytra distinct, narrow, general colour of upper surface black (sinus of mentum divergent on sides, posterior tarsi sulcate externally).  
 Prosternum bordered at base *H. carinatum*, Chaud.  
 Prosternum not bordered at base.....  
 .....*H. amacropterum*, Chaud.
- II. Basal border of elytra joining lateral border without any dentiform projection.
- g.* Prothorax with the sides sinuate before the base; the basal angles marked.  
 Colour entirely black.....*H. cordatum*, Chaud.  
 Colour purple.....*H. superbum*, Casteln.
- gg.* Prothorax without any sinuosity on the sides near the base; the basal angles rounded.
- h.* Elytra with interstices equal, 3rd impunctate; colour black.....*H. obscuripenne*,\* Macl.
- hh.* Elytra with 3rd, 5th and 7th interstices stronger than others.  
 Elytra with 3rd, 5th and 7th interstices carinate; colour black; prothorax and elytra margined with green .....*H. cyaneocinctum*, Boisd.  
 Elytra with 3rd, 5th and 7th interstices costate, and little stronger than others; elytra of a blackish but green colour.....*H. atro-viride*, Sl.

The species of *Homalosoma* not tabulated above are:—  
*carbonicolor, curtum, nigrum, opacipenne, subvirens, violaceum.*

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\* *Homalosoma obscuripenne*, Macl., P.L.S.N.S.W., 1887 (2), II., p. 220. Specimens of this species are in my collection, which have been identified by comparison with the type; it is, however, impossible to recognise it from Sir William Macleay's description in which he described the prothorax as "longer than broad," whereas in reality it is broader than long, the actual measurement (from one of my specimens) being 5 × 7 mm.

*H. curtum* and *H. nigrum*, Chaud., are said by de Chaudoir\* to be allied to *H. breve*, Motsch., being placed in the genus *Nurus*. Both are black species.

*H. subvirens*, Chaud. Unknown to me in nature. From the description it resembles *H. alternans*, Sl., but has the prothorax and elytra margined with green. The elytra are described as in *vigorsi*, all the interstices nearly equal; no mention is made of the humeral angle.

*H. violaceum*, Casteln. I have never seen the description of this species, and know nothing about it.

*H. opacipenne*, Macl. This species seems, from the description, to be allied to *H. nitidicolle* and *H. wilsoni*. Its black opaque colour would in itself distinguish it from these species.

*H. carbonicolor*, Motsch. The description of the prothorax as with rectangular basal angles, and the elytra with flat impunctate interstices (the 8th being carinate) seems to approximate this species to *Trichosternus planiusculus*, White, from New Zealand. These features do not occur in any Australian species known to me, therefore I think *H. carbonicolor* will prove to be an extra-Australian species.

#### HOMALOSOMA IMPERIALE, n.sp.

♀. Broad, robust; head large; prothorax short, transverse, a little narrowed behind; elytra broadly ovate, finely punctate-striate, interstices lightly costate, shoulders dentate.

Upper surface of head and prothorax of a gilt brassy colour with purple reflections; elytra subsericeous, finely shagreened, purple black with a narrow shining brassy green margin; under-surface and legs piceous-black. Head large (7.5 × 7.75 mm.), smooth, depressed between eyes; vertex convex; front bi-impressed, the impressions wide, foveiform behind the clypeus; clypeal suture well marked; clypeus longitudinally strigose; eyes convex, prominent; orbit widely and lightly inflated below and behind eyes. Prothorax short, transverse (6.5 × 10 mm.), widest a little behind anterior angles, depressed, lightly declivous towards

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\* Bull. Mosc. 1878, LVIII., No. 3, pp. 37, 38.

base; sides lightly rounded on anterior half, gently and continuously narrowed on posterior half; anterior margin emarginate; base emarginate in middle, lightly rounded on each side of peduncle; anterior angles roundly obtuse, a little advanced; basal angles marked, obtuse; border reflexed, wide in front, becoming narrower backwards; median line linear, extending from anterior to basal margin, placed in a wide channel in middle of length; lateral basal impressions wide, shallow, irregularly shaped, distant from lateral margin, attaining the base; the space between the basal impressions depressed, striolate; posterior marginal puncture placed very near the edge a little before the basal angle. Elytra wider than prothorax ( $17 \times 12.75$  mm.), widest behind the middle, truncate on base, widely rounded behind, depressed on disc towards base, very gently declivous to apex, decidedly declivous on sides from seventh interstice; sides rather strongly rounded, narrowed to base; apical curve short, obtuse, obsoletely sinuate on each side, a light emargination at suture; striae wide, shallow, finely punctate; striae at base of first interstice short, distinct; interstices raised, lightly costate, their summits not shining, fifth and seventh stronger than others, seventh strongest, eighth convex, ninth not defined from margin, a row of strong punctures along its inner margin and a row of very small irregularly placed punctures indicating the place of the ninth stria; lateral border strongly reflexed in middle of length, much less so on apical curve and behind the shoulders, forming a short upturned projection at the humeral angles; marginal channel wide, narrower towards base; basal border arcuate on posterior margin; third interstice with three or four punctures along its course, the anterior placed on basal fourth near third stria, the others on apical two-thirds, the posterior distant from apex. Prosternum longitudinally impressed between coxae, setigero-punctate; mesosternum and metasternum laevigate. Ventral segments smooth, third, fourth, and fifth setigero-punctate on middle of posterior margin. Legs long, light; posterior coxae contiguous.

Length 33, breadth 12.75 mm.

*Hab.*—North Queensland (Du Boulay). In the collection of Mr. C. French.

This splendid species would have been considered by Baron de Chaudoir as belonging to the sub-genus *Nurus*. I can only compare it with *H. breve*, Motsch., which is a much smaller and differently coloured insect, with the prothorax strongly sinuate behind and the elytra much more deeply striate, the interstices being stronger and more costate. *H. breve* has a puncture on the outer side of the third interstice of the elytra near the base (about 1.75 mm. behind the basal border) as in *H. imperiale*; this is probably a distinctive feature of this group of *Homalosoma* as I have not found it in other species known to me. In *H. breve* the anterior marginal puncture of the prothorax is present, but it is wanting in the type specimen of *H. imperiale*.

#### HOMALOSOMA ALTERNANS, n.sp.

Robust, elongate-oval, depressed; prothorax subquadrate, the sides sinuate towards base; elytra ovate, punctate-striate, third, fifth and seventh interstices subcarinate, shoulders dentate.

♂. Black; head and prothorax shining; elytra opaque, excepting the margin and summits of the stronger interstices; undersurface and legs black, shining. Head large (5.75 × 6 mm.), smooth, depressed between the eyes; vertex convex; front with two widely placed shallow impressions; clypeal suture lightly impressed; eyes convex, not prominent; orbits swollen below eyes, shortly but not abruptly declivous behind. Prothorax depressed, broader than long (6.3 × 7.6 mm.), broadest a little before the middle; sides lightly rounded on anterior part, a little narrowed to anterior angles, lightly narrowed behind the middle, lightly sinuate posteriorly and meeting the base at right angles; anterior margin emarginate; base sinuate, emarginate in middle, gently rounded on each side; anterior angles widely obtuse, a little advanced; posterior angles marked, obtuse at summit; lateral border reflexed, a little wider towards the basal angles, narrowly and weakly marked along base on each side; median line well marked, linear, reaching the base; lateral basal

impressions broad, shallow; posterior marginal puncture in the marginal channel at the basal angle. Elytra depressed, ovate, broader than prothorax (15.5 × 9.8 mm.), widest a little behind middle, widely rounded at apex; sides lightly rounded, a little narrowed to base; apical curve short, obtuse, oblique (not sinuate) on each side; striae finely punctate; striole at base of first interstice short, distinct; interstices costate, first, third, fifth and seventh strongly costate and much more elevated than second, fourth and sixth, eighth flat, ninth obsolete anteriorly, narrow posteriorly, punctate along the course of the deeply impressed eighth stria, the punctures more closely placed posteriorly; lateral border lightly upturned; marginal channel wide; third interstice with three widely placed punctures on apical half. Prosternum longitudinally impressed between coxæ, setigero-punctate on base. Metasternum with a few strong setigerous punctures on each side near posterior margin. Ventral segments lightly impressed on each side, second with a few fine setigerous punctures behind posterior coxæ, third with a few inconspicuous punctures on each side of middle, fourth and fifth with a single setigerous puncture on each side of middle. Posterior coxæ contiguous; anterior tarsi with three basal joints broadly dilatate and squamulose beneath.

♀. Not differing from ♂, except in sexual characters, and in having the sides of the prothorax apparently less sinuate towards the base.

Length 29, breadth 9.8 mm.

*Hab.*—Port Macquarie, N.S.W. (I took a single specimen (♀) at Port Macquarie in February, 1886; other specimens are in my collection without exact locality).

The affinity of this species is to *H. renardi*, Chaud., and *H. vigorsi*, Gory, with both of which it agrees in all important structural characters. Its smaller size prevents it from being confused with *H. renardi*, while from *H. vigorsi*, which is about the same size, it may easily be distinguished by its broader and more depressed form; the prothorax sinuate on each side towards

the base, with the basal angles more decidedly marked; and the elytra with the third, fifth and seventh interstices much more raised than the alternate ones.

HOMALOSOMA ATRO-VIRIDE, n.sp.

♂. Robust, elongate-oval, convex; prothorax transverse, subcordate, posterior angles rounded; elytra oval, punctate-striate, interstices lightly costate, shoulders rounded.

Head black, with greenish reflections; prothorax black, becoming green towards the sides and in the lateral basal impressions; elytra blackish-green (summits of the interstices black, the rest of the elytra of a green hue); undersurface, legs, antennæ and palpi piceous (a faint green tinge on the prosternal episterna). Head large (5.6 × 6.4 mm.), smooth, lightly convex; front with two widely placed shallow irregular impressions; clypeal suture distinctly impressed; eyes convex, not prominent; three supra-orbital setigerous punctures on each side.\* Prothorax subcordate, short, transverse (5.6 × 8.2 mm.), broadest before the middle, evenly and roundly narrowed to base, convex, declivous towards base; anterior margin emarginate; base widely and very lightly emarginate; anterior angles narrow, obtuse, projecting slightly; basal angles not marked, rounded; border reflexed, widely so and forming the margin of the basal foveæ at the basal angles, narrowly marked along each side of the base almost to the middle; median line strongly impressed, reaching the base, placed in a well marked channel; a deep wide depression near each basal angle; the space between these depressions flattened and defined anteriorly by an arcuate transverse line; two marginal setigerous punctures on each side, the anterior a little before the middle, the posterior near the edge considerably

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\* My single specimens of *H. cyaneocinctum*, Boisd., and *H. superbum* Cast., also have three setigerous supra-orbital punctures on each side; all the other species of *Homalosoma* known to me have only two supra-orbital punctures, the normal number among the *Feronides*. Considering how constant the presence of two supra-orbital punctures is among the *Feronides* and allied tribes, and the high classificatory value attributed to their presence among this division of the *Carabidae* by Dr. G. H. Horn, this variation from the ordinary number is worthy of note.



before the basal angle. Elytra oval, a little wider than prothorax (15.5 × 9.7 mm.), lightly convex, gently declivous to apex; apical curve obtuse, evenly rounded; striæ shallow, finely punctate; striole at base of first interstice obsolete; interstices lightly costate, third, fifth and seventh stronger than second, fourth and sixth, seventh strongest (decidedly costate), eighth convex, ninth merged with margin, a row of lightly impressed rather distantly placed punctures along its inner margin; lateral border reflexed, hardly so on apical curve; marginal channel narrow, equal; basal border hardly arcuate on each side; third interstice with two or three widely placed punctures on apical half. Prosternum lightly longitudinally impressed between coxæ; a single setigerous puncture on each side of base. Mesosternum and metasternum lævigatæ. Ventral segments smooth, third, fourth and fifth with a setigerous puncture on each side of middle. Posterior coxæ narrowly divided, metasternum and first ventral segment meeting between them; anterior tarsi with three basal joints broadly dilatate and squamulose beneath.

♀. Not differing from ♂, except in sexual characters.

Length 28, breadth 9.7 mm.

*Hab.*—Inverell, N.S.W.; (sent by Mr. W. S. Duncan).

A thoroughly distinct species. The colour alone would serve to separate it from *H. cyaneocinctum*, Boisd., *H. superbum*, Casteln., and *H. obscuripenne*, Macl., the three most nearly allied species known to me. The interstices of the elytra are very different in *H. cyaneocinctum*, which has the third, fifth and seventh strongly carinate, the fourth and sixth being obsolete. *H. superbum* differs in the shape of the prothorax and elytra; the sides of the prothorax being sinuate behind, the elytra obovate, &c. *H. obscuripenne* has the elytra similarly shaped, but with all the costæ equal; and has the prothorax more cordate, with the posterior angles more marked though obtuse; its colour is entirely black. *H. subvirens*, Chaud., (only known to me by description) is a smaller species, and seems to differ decidedly in colour, shape of prothorax, and the interstices of the elytra.

## Genus PTEROSTICIUS.

Though in the table given above I have felt compelled to include the genera *Notonomus*, *Sarticus*, *Coronocanthus*, and *Rhabdotus* in the central genus *Pterostichus*, yet, for Australian workers the genera *Notonomus* and *Sarticus* are so convenient that in all practical work they should be maintained; their use greatly simplifies the recognition of species, and except in very rare cases no difficulty is experienced in referring species to the right one of these genera.\*

*Coronocanthus sulcatus*, Macl., = *Sarticus quadrisulcatus*, Chaud. A comparison of a specimen of *Coronocanthus sulcatus*, Macl., with the description of *Sarticus quadrisulcatus*, Chaud., leaves no doubt in my mind of their identity. Macleay's description was published in the year 1877; Chaudoir's in 1878. It seems probable the genus *Coronocanthus* should be recognised as distinct from *Sarticus*, though, at present, I am not prepared to separate it.

*Rhabdotus* is founded for a Tasmanian group of species having the labrum with a light linear longitudinal impression in the middle; I cannot satisfactorily differentiate it from *Pterostichus*. The facies of the species of this group readily separate them from *Notonomus* and *Sarticus*.

## PTEROSTICHUS BLACKBURNI, n.sp.

♂. Robust, elytra rather depressed on disc; prothorax transverse, widely margined; elytra oval, strongly crenulate-striate, the interstices depressed.

Black. Head not large, smooth, convex; frontal impressions quite obsolete; clypeal suture hardly impressed; eyes prominent,

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\* *Notonomus* and *Sarticus* may be separated as follows:—

Prothorax with a narrow basal impression on each side, the lateral border narrow, not forming a wide border to the basal impressions ... ..	<i>Notonomus</i> .
Prothorax with a broad foveiform basal impression on each side widely margined by the lateral border ... ..	<i>Sarticus</i> .

Perhaps, the more accurate course would be to regard the species now attributed to *Notonomus*, which vary among themselves a good deal, as belonging to *Pterostichus*, and to maintain the genus *Sarticus* which comprises a clearly defined group of species.

projecting beyond posterior part of orbit, this about two-thirds the size of eyes. Prothorax subquadrate ( $3.5 \times 4.6$  mm.); sides evenly rounded; anterior margin very lightly emarginate; base truncate, very lightly emarginate across peduncle; anterior angles rounded; basal angles rounded, but marked; lateral border widely and strongly reflexed; marginal channel wide; lateral basal impressions wide, foveiform; median line linear, well marked, not ending behind in a punctiform impression; posterior marginal puncture at basal angles. Elytra oval ( $10 \times 5.8$  mm.), lightly convex, depressed on disc, widest a little behind middle; shoulders rounded; basal border nearly straight on each side from scutellar striole to shoulders, not raised above lateral border or projecting the least at shoulders; apex widely rounded, lightly subsinuate on each side; striae strongly impressed, crenulate; scutellar striole very short, on first interstice; interstices rather depressed, hardly convex, hardly more prominent towards apex, third unipunctate (the puncture placed on the posterior declivity about 1.5 mm. from apex), ninth punctate (the punctures separate, widely placed in middle). Ventral segments smooth, first not punctate near coxæ, apical with two setigerous punctures on each side of anus. In all other respects similar to *Notonomus*.

Length 16, breadth 5.8 mm.

*Hab.*—Mountains at source of Ovens River, Victoria. (A single specimen sent to me by the Rev. Thos. Blackburn.)

This is an isolated species showing no very close affinity, or even resemblance, to any other Australian Feronide that I know; its position seems to be between the sub-genera *Notonomus* and *Sarticus*, and it makes a link between them that points to the necessity of merging both with the genus *Pterostichus*. The form of the prothorax separates it from any species hitherto attributed either to *Notonomus* or *Sarticus*; the lateral border does not extend past the basal angles to form a reflexed margin behind the lateral basal impressions, as it does in all the species of *Sarticus*, but it is far more widely reflexed than in any species of *Notonomus*; the basal angles, too, are marked, though rounded

at their summit; in *Sarticus* they are never marked. The unipunctate third elytral interstice is a remarkable feature in an Australian Feronide with the scutellar striole at the base of the first interstice.

#### NOTOLESTUS, n.gen.

This is a new genus proposed for the reception of *Abax sulcipennis*, Macl. The single specimen in my possession was brought by Mr. J. H. Maiden from the Don Dorrigo scrub, near the Bellingier River, N.S.W., and is in an imperfect condition, so that I can only indicate some of its most striking features in the following brief diagnosis. It appears a completely isolated form.

Colour of upper surface entirely cupreous. Head transversely impressed across vertex; front strongly bi-impressed, the impressions divergent backwards. Mandibles short, stout. Labrum transverse, lightly and widely emarginate. Prothorax depressed, transverse, with wide lateral margins; lateral border thick; two basal impressions on each side. Elytra lightly convex; dorsal surface of each elytron with two wide channels, a narrow ridge at bottom of each of these channels (being the second and fourth interstices); abbreviated scutellar striole wanting; third interstice with two widely separated punctures on posterior half, fifth interstice very wide, extending to the marginal stria; shoulders rounded; basal border wide, forming a strong short prominence at each humeral angle; margin very strongly sinuate on each side of apex; a strong internal plica joining the margin on each side behind the sinuosity of the apical curve. Ventral segments not transversely sulcate (apical segment wanting in my specimen). Male with three basal joints of anterior tarsi dilatate and squamulose beneath.

#### Genus PROSOPOGMUS.

I have found it impossible to maintain de Chaudoir's genera *Ceneus* and *Ophrycosternus* distinct from *Prosoptomus*. It seems necessary to accept *Prosoptomus* as the name of the genus, it

having been characterised before the other two; \* but it is with reluctance I adopt it, seeing that it was originally formed for a species (*P. impressifrons*, Chaud.) † said to be from New Zealand, which may differ considerably from Australian species. The genus, as constituted in this paper, may be broken up into groups thus:—

A. Metasternal episterna short ... (*Prosopogmus* of Chaudoir.)

B. Metasternal episterna elongate.

a. Elytra with fifth and seventh interstices enclosing sixth at apex ... .. (*Ophryosternus* of Chaudoir.)

b. Elytra with sixth and eighth interstices enclosing seventh at apex ... .. (*Cenens* of Chaudoir.)

The form of the metasternal episterna has no weight in *Simodontus*, therefore I think it should not be given undue prominence here; the interstitial character also appears to me of subordinate importance. It may be noted here that the genera *Simodontus*, *Hormochilus*, and *Setalinorpha* are differentiated from one another, and from *Prosopogmus* on very doubtful grounds.

#### PROSOPOGMUS AUSTRINUS, n.sp.

Oval, depressed; prothorax subquadrate, posterior angles sharply rectangular; elytra striate, shoulders feebly dentate; metasternal episterna short.

Piceous black; legs, antennæ, mouth-parts and sides of elytra towards apex piceous red.

Head moderate; front strongly impressed; the impressions short, very divergent behind, curved inwards at posterior extremity, eyes convex, not deeply set in orbits. Labrum lightly emarginate. Prothorax subquadrate (2·2 × 2·6 mm.), depressed on disc and towards base, lightly declivous on anterior three-

\* Bull. Mosc. 1865, III, p. 93.

† It seems as well to point out here that Captain Broun is in error (Man. N.Z. Col., 1880, p. 30.) in making the comparison of *P. impressifrons* in de Chaudoir's original description as being with *Trichosternus guerini*, Chaud., (= *Platysma australasie*, Guér.) instead of with *Feronia* (*Notonomus*) *australasie*, Dej.; the latter being the species de Chaudoir referred to.

fourths of sides, widest a little behind anterior marginal puncture, wider across base than across apex; sides lightly rounded on anterior three-fourths, subsinuate posteriorly and meeting the base at right angles; anterior margin emarginate; base emarginate across peduncle; anterior angle obtuse; basal angles rectangular; border narrow, reflexed on sides, extending along anterior margin on each side, ending at basal angles; median line lightly impressed; a short straight linear impression extending forward from base on each side, rather nearer median line than margin; space between these impressions and margin flat, obsoletely and widely impressed; posterior setigerous marginal puncture beside the border at each basal angle. Elytra ovate, short, a little wider than prothorax ( $4.6 \times 3$  mm.), lightly rounded on sides, depressed on disc, strongly declivous to apex, abruptly declivous on sides from sixth stria; apical curve obtuse, widely sinuate on each side; striae well marked; interstices flat on disc, seventh and eighth convex, fifth and seventh enclosing sixth at apex; third lightly 3-punctate, anterior puncture near third stria, two posterior ones along course of second stria; ninth interstice wider towards apex, strongly punctate; basal border ending in a short dentiform projection at humeral angles; lateral border strongly reflexed. Prosternum bordered on base. Posterior femora dilatate behind trochanters.

Length 7.5, breadth 3 mm.

*Hab.*—Burrawang, N.S.W. (Taken by me 10th November, 1890.)

This species is readily distinguished from *P. boisduvallii*, Casteln., by its much smaller size; it differs too in having the eighth interstice of the elytra narrow and convex; and not wide and flat, as in *P. boisduvallii*. From *P. rubricornis*, Sl., its larger size, more depressed form, and the finer punctures of the third interstice of the elytra help to differentiate it.

#### PROSOPOGMUS RUBRICORNIS, n.sp.

Elliptic-oval; prothorax subquadrate; elytra short, striate, shoulders dentate; prosternum bordered; metasternal episterna short.

Piceous black ; legs, antennæ and mouth-parts reddish. Head of moderate size ; front strongly impressed on each side ; impressions short, strongly divergent behind ; orbit weakly developed behind eyes, abruptly constricted posteriorly ; eyes small. Labrum truncate. Prothorax subquadrate ( $1.75 \times 2.1$  mm.), widest just behind anterior marginal puncture, wider across base than apex ; sides rounded, more shortly and decidedly narrowed anteriorly than posteriorly, lightly subsinuate before the base ; anterior margin emarginate ; base truncate (lightly emarginate across peduncle) ; anterior angles widely obtuse ; basal angles rectangular ; border narrow, reflexed on sides, extending along lateral third of anterior margin on each side, ending abruptly at basal angle ; median line lightly impressed, not reaching either margin ; a well marked straight impression extending forward from base about one-third the length of prothorax on each side, rather nearer median line than margin ; space between this impression and margin not convex and with a short obsolete impression in middle ; posterior setigerous marginal puncture beside the margin near each basal angle. Elytra ovate, short, a little wider than prothorax ( $3.5 \times 2.5$  mm.), convex, strongly declivous to apex, sinuate on each side of apical curve ; striae strongly impressed ; striole at base of second interstice short, linear ; interstices not convex on disc, seventh convex for whole length, fifth and sixth convex towards posterior extremity, fifth and seventh enclosing sixth at apex ; third 3-punctate, the punctures strongly impressed, anterior on basal third in course of third stria, two posterior ones along course of second stria ; ninth interstice wider at apex, strongly punctate along course of eighth stria, the punctures interrupted in middle ; basal border ending in a short dentiform projection at humeral angles ; lateral border strongly reflexed. Prosternum bordered on base. Metasternal episterna short. Posterior femora dilatate behind trochanters.

Length 6.5, breadth 2.5 mm.

*Hab.*—Bulli, N.S.W. (A single specimen occurred to me 7th November, 1889.)

Its small size, and the deep foveiform impressions of the third interstice of the elytra distinguish the species; it is rather a member of the central group of the genus than of *Ceneus*, or *Ophrogosternus*.

PROSOPOGMUS NAMOYENSIS, n.sp.

Apterous; elongate-oval, lightly convex, prothorax subquadrate; elytra striate, interstices convex, shoulders dentate; metasternal episterna elongate.

Black, shining (elytra slightly opaque in ♀); tarsi and antennae reddish. Head not large, smooth; front strongly bi-impressed; eyes convex, prominent, not set deeply in orbits behind. Labrum hardly emarginate. Prothorax subquadrate (2.2 × 2.5 mm.), widest a little behind anterior marginal puncture, hardly narrowed to base, wider across base than across anterior margin; sides lightly rounded, strongly and roundly narrowed to anterior angles, not sinuate before the base; anterior margin emarginate; base lightly emarginate in middle, a little oblique at each side; anterior angles obtuse; basal angles well marked, sub-rectangular; lateral border narrow, reflexed; median line lightly impressed; a deep straight impression extending forward from base on each side, rather nearer median line than margin; space between these impressions and margin depressed and impressed with a wide foveate impression; the lateral basal impressions minutely punctulate; posterior setigerous marginal puncture beside border at each basal angle. Elytra ovate, considerably wider than prothorax (5 × 3.3 mm.); sides subparallel, shortly and lightly narrowed to shoulders; base truncate; apical curve lightly sinuate on each side; striae deeply impressed; striae at base of second interstice short, linear; interstices convex, eighth and sixth enclosing seventh at apex; third 3-punctate, anterior puncture on basal third near third stria, two posterior ones on course of second stria; ninth interstice punctate, the punctures interrupted in middle; basal border ending in a short dentiform projection at humeral angles; lateral border reflexed. Prosternum bordered on base. Metasternal episterna elongate.

Length 9, breadth 3.3 mm.



*Hab.*—Namoï River, N.S.W. (I found this species plentiful at Carrol on the Namoï, 12 miles above Gunnedah.)

The ♀ has the interstices of the elytra less convex than the ♂, and slightly subsericeous or opaque. The colour of the elytra in both sexes seems rather a deep blue-black than a true black.

It belongs to the *Ceneus* group of the genus. It may be distinguished from *P. (Ceneus) chalybeipennis*, Chaud., by its smaller size, narrower form, the less convex interstices of the elytra, and by the shape of the prothorax, which is less transverse, being less dilatate at the anterior marginal punctures and less narrowed posteriorly.

*Note.*—I had formerly thought this species might be the one described by de Castelnau as *Harpalus quadraticollis*, which is said by de Chaudoir\* to be a *Hormochilus*; but besides its not agreeing with the description of *H. quadraticollis*, I have a specimen of a *Hormochilus* from Southern Queensland, which I believe to be de Castelnau's species. My Southern Queensland species is identical (from comparison with type) with the species that Sir William Macleay took to be *Setalis niger*, † Casteln.; it is a winged insect, as is also *Hormochilus monochrous*, Erich., from examination of a specimen from Melbourne in my collection.

#### SETALIMORPHUS, n.gen.

*Labrum* lightly emarginate.

*Mentum* not deeply emarginate; lobes short, very oblique on inner side; median projection short, wide.

*Labial palpi* with last joint thick, truncate.

*Prothorax* subquadrate; two basal impressions on each side.

*Elytra* deeply striate; 3rd interstice unipunctate on apical third; shoulders dentate.

*Prosternum* margined at base.

*Metasternal episterna* (with epimera) about as long as wide, hardly narrowed posteriorly.

\* Ann. Mus. Civ. Genov. 1878, xii. p. 475.

† See note on *Setalis*, ante p. 416.

*Ventral segments* transversely sulcate; ♂ with apical segment deeply bifoveolate towards middle.

It seems impossible to associate the species on which this genus is founded (*S. punctiventris*) with any previously described Australian Feronide. Having only one specimen, and that with the maxillary palps and the apical portion of the antennæ wanting, I am unable to diagnose the genus fully; but the characters given above distinctly separate it from the many divisions that have been formed among the Feronides of Australia. As far as I know, *Setalis niger*, Casteln., is the only other Australian Feronide with the last ventral segment deeply bifoveolate; this character I believe to be a sexual one, but never having seen the female of either of these species, only judge by analogy from the Chlæniide genus *Coptocarpus*, in which it also occurs, but only in the male.

SETALIMORPHUS PUNCTIVENTRIS, n.sp.

Elongate-oval; head smooth; prothorax subquadrate; elytra striate, the interstices convex, third unipunctate.

♂. Black; undersurface, legs, antennæ and mouth-parts reddish-piceous. Head small, suddenly constricted to a wide neck behind eyes; front strongly impressed on each side; the impressions wide apart, diverging backwards; eyes globose, very prominent, enclosed behind; an obsolete transverse impression across vertex level with posterior margin of eyes. Prothorax subquadrate (2.2 × 2.4 mm.), widest a little before middle, rather depressed, declivous on each side to anterior angles; sides lightly rounded on anterior half, a little narrowed to base; anterior angles wide, lightly marked, not advanced; base subtruncate, widely and lightly emarginate across peduncle; basal angles rectangular; lateral border narrow, reflexed, ending behind at basal angles; median line distinctly impressed; two basal impressions on each side, the interior strongly impressed, narrow, placed about half-way between median line and margin, the other lightly marked, wide, short, near basal angle. Elytra a little wider than prothorax (4.75 × 2.8 mm.), lightly convex, lightly declivous to base on

each side of suture, roundly and abruptly declivous to apex, truncate at base, rounded at apex; apical curve with a light sinuosity on each side; sides almost parallel; striae deep, simple, extending to base and apex, 2nd rising in a punctiform impression at base; scutellar striole wanting; interstices strongly convex, the single puncture of 3rd placed a little behind half the length, near second stria; ninth interstice punctate, the punctures wide apart in middle; basal border with a strong short tooth at each shoulder; lateral border narrow, reflexed. Prosternum truncate and margined at base; episterna lightly and finely punctulate; mesosternal and metasternal episterna punctate, the latter short. Ventral segments sulcate, punctate laterally; anterior margin of three last segments foveate-impressed; apical segment deeply bifoveolate; punctures of ambulatorial setae strongly marked.

Length 8, breadth 2·8 mm.

*Hab.*—Springwood, N.S.W. (A single specimen in my collection taken in March.)

SETALIMORPHUS NANUS, n.sp.

♀. Elongate-oval; prothorax subquadrate; elytra striate, interstices flat, third unipunctate; metasternal episterna very short.

Black, shining; legs, antennae and mouth-parts reddish-piceous. Head convex, not constricted into a neck behind eyes; front strongly bi-impressed; the impressions wide apart, diverging backwards; vertex not transversely impressed; eyes hemispherical, prominent, hardly enclosed behind by orbit. Prothorax subquadrate (1·8 × 2 mm.), widest before middle, depressed, gently declivous on each side to anterior angles; sides hardly rounded, a little narrowed to anterior angles, very little narrowed to base; anterior angles wide, marked, not advanced; base subtruncate, hardly emarginate across peduncle; basal angles rectangular; lateral border fine, ending behind at basal angles; median line linear, lightly marked, extending to base; two light basal impressions on each side; the interior about half-way between median line and margin, narrow, deep; the other lightly marked, wide,

short, near basal angle; a few punctures in the basal impressions. Elytra a little wider than prothorax ( $3.7 \times 2.3$  mm.), depressed (very lightly convex), very gently declivous to base on each side of suture, roundly but not abruptly declivous to apex, truncate at base, widely rounded at apex; sides subparallel, hardly narrowed to base; striæ shallow, simple, extending to base and apex, second rising in a punctiform impression at base; a short oblique striole on second interstice at base; interstices flat, lightly convex on lateral and posterior declivities; the single puncture of third placed about posterior third near second stria; ninth interstice punctate, the punctures more widely placed in middle of length; basal border with a strong short tooth at shoulders; lateral border narrow, reflexed. Prosternum not impressed between coxæ, truncate and margined at base; the episterna impunctate; mesosternal and metasternal episterna and sides of metasternum punctate. Ventral segments finely transversely sulcate, obsolete rugose laterally, fourth, fifth and sixth bipunctate towards middle, apical quadripunctate along posterior margin.

Length 6.5, breadth 2.3 mm.

*Hab.*—Ferntree Gully near Melbourne. (A single specimen taken in the ranges between Ferntree Gully and the Village Settlement, 19th Nov., 1893.)

In general appearance this species resembles the smaller species of *Simodontus*, but differs decidedly from them in the rectangular basal angles of the prothorax, and the unipunctate third interstice of the elytra. I do not feel certain that it should be considered congeneric with *S. punctiventris* (the type of the genus). My single example is a female, and probably for that reason has not the labial palps with a thick terminal joint, or the apical segment of the abdomen deeply bifoveolate as in *S. punctiventris*; but, as it is more closely allied to that species than to any other Australian Feronide, and as the classification of our Feronides is certainly far from perfect yet, it seems better to err on the side of having too few genera rather than to make them to try and maintain an artificial and probably hopelessly confused system of classification.

## Genus RHYTISTERNUS.

*Table of Species of Rhytisternus known to me.*

## I. Unicolorous species (black or piceous-black).

## A. Elytra with strongly impressed striae.

a. Sides of prothorax roundly narrowed behind without any trace of sinuosity before base, basal angles not marked.

b. Form narrow, convex.....*R. solidus*, Sl.

bb. Form depressed. ....  
.....*R. cyathoderus*, Chaud., & *R. splendidus*, Blkb.\*

aa. Sides of prothorax lightly but not roundly narrowed to base, basal angles obtuse.

c. Form stout, convex.....*R. bovilli*, Blkb.

cc. Form depressed.....*R. levilaterus*, Chaud.†

aaa. Sides of prothorax sinuate or subsinuate before base, basal angles marked.

d. Interstices of elytra not convex posteriorly .....  
.....*R. nigellus*, Sl.

dd. Interstices of elytra convex.

e. Prosternal episterna not perceptibly strigose, humeral angles shortly but distinctly dentate.....*R. gigas*, Sl.

ee. Prosternal episterna longitudinally strigose, humeral angles without any dentiform projection.

f. Prothorax but little broader than long, size small.....  
.....*R. miser*, Chaud.

ff. Prothorax transverse, size large.

g. Five decidedly convex interstices on each elytron.....  
.....*R. carpentarius*, Sl.

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\* The differences between *R. cyathoderus*, Chaud., and *R. splendidus*, Blkb., are more of a general than a particular character, and are not easily tabulated. The smaller size and the longer prothorax more narrowed to the base of *R. splendidus* are perhaps the most easily noted characters distinguishing it from *R. cyathoderus*.

† = *R. sulcatipes*, Blkb.

- gg. Four rather convex interstices on each elytron.....  
 .....*R. liopleurus*, Chaud.
- AA. Elytra smooth with faint linear striæ .....  
 .....*R. (Pecilus) laevis*, Macl.
- II. Upper surface black, elytra widely margined with yellowish  
 red.....*R. limbatus*, Macl.

The remaining species of the genus are *R. puella* and *R. plebius* of Chaudoir; *R. (Omaseus) arnheimensis*, Casteln.; *R. angustulus*, *R. (Omaseus) froggatti* and *R. mastersi* of Macleay; and *R. cardwellensis*, Blkb.

*R. puella* and *R. plebius* go with *R. miser*, of which, it being a species subject to variation in size, they are likely to prove synonyms.

*R. arnheimensis* I have seen in the Howitt Collection, at the Melbourne University. It is a narrow species with the prothorax cordiform, the sides being sinuate before the base; I cannot indicate its position in the genus.

*R. angustulus* is allied to *R. solidus*.

*R. froggatti*:—I have ascertained, by inspection of the type, that *Omaseus froggatti*, Macl., is a *Rhytisternus*, but I cannot now tabulate it.

*R. mastersi*:—I have a specimen from the Gayndah district in Queensland, but apart from the prothorax being slightly less sinuate behind than is usual in *R. liopleurus*, Chaud., can find no differences between them. I think it synonymous with *R. liopleurus*.

*R. cardwellensis* I have seen in the collection of Mr. C. French, but I cannot now place it with any confidence.

#### RHYTISTERNUS SOLIDUS, n.sp.

Elongate, robust, convex; prothorax transverse, narrowed behind, sides rounded, not sinuate before base; elytra with four inner striæ strongly impressed.

Black, shining; labrum, antennæ, palpi and tarsi reddish-piceous. Head large, smooth; front strongly impressed; the impressions

diverging backwards; clypeal suture strongly impressed and connecting frontal impressions in front; clypeus declivous to labrum; eyes convex, set lightly in orbit at base. Prothorax shortly subcordate ( $2.8 \times 3.5$  mm.), convex, very lightly declivous posteriorly, not wider across base than apex; disc transversely striolate; sides rounded, more shortly and decidedly so to anterior angles, lightly and evenly so to base; anterior margin hardly emarginate; base lightly rounded; anterior angles rounded, hardly advanced; basal angles rounded, not marked; lateral border thick, ending at basal angle; median line well marked, linear; two lateral basal impressions on each side; the interior short, narrow, linear at bottom, attaining base; the external foveiform, placed near the basal angle; space between inner basal impressions depressed below disc, convex; posterior marginal puncture at basal angle. Elytra a little wider than prothorax, oval ( $7 \times 4$  mm.), truncate on base with shoulders rounded, convex; sides lightly rounded; apical curve widely but decidedly sinuate; striae suberemulate; four inner striae entire, strongly impressed, fifth entire, very lightly impressed, sixth and seventh obsolete, except towards the apical extremity, eighth strongly impressed; four inner and ninth interstices strongly convex, ninth punctate as usual in genus; lateral border finely reflexed, marginal channel narrow. Prosternum bordered on base. Ventral segments finely and closely rugulose-punctulate.

Length 12, breadth 4 mm.

*Hab.*—Coomooboolaro, Duaringa, Queensland. (Sent to me by Mr. Geo. Barnard.)

This species can only be compared with *R. angustulus*, Macl., but I have been able to ascertain by comparison with the type of *R. angustulus* that it is distinct. Beyond the larger and heavier form of the present species I cannot now suggest the actual differences between them. The narrow convex facies of these two species separate them decidedly from all the others of the genus I have seen.

## RHYTISTERNUS NIGELLUS, n.sp.

♀. Oblong, depressed; prothorax subcordate, as wide across apex as across base, sides lightly sinuate towards base; elytra with four inner striae strongly impressed, entire, fifth weaker, interstices depressed.

Black; legs, labrum, palpi and antennae piceous-red. Head small, smooth; front bi-impressed; the impressions short, linear, arcuate, divergent behind, their apices connected by the strongly impressed clypeal suture; clypeus strongly declivous to labrum; eyes convex, set lightly in orbits at base. Prothorax transversely cordate ( $2.4 \times 3.2$  mm.), depressed on disc, roundly declivous on anterior part of sides; disc transversely striolate; sides almost evenly rounded on anterior three-fourths, obliquely straightened (not out-turned) before base; anterior margin almost truncate, hardly emarginate; base subtruncate, very lightly sinuate; anterior angles truncate, not perceptibly advanced; basal angles sharply marked, rectangular; lateral border thick; median line lightly impressed, linear; two separate lateral basal impressions on each side, neither attaining base, the internal having a narrow elongate well-defined course, the external forming a foveiform puncture; the space between the internal basal impressions depressed, that between external and lateral margin very narrow; posterior marginal puncture small, placed at extremity of marginal channel. Elytra wider than prothorax ( $6.8 \times 4$  mm.), lightly rounded on sides, truncate on base with the shoulders rounded; apical curve lightly but decidedly sinuate on each side; striae lightly crenulate, four inner ones entire, strongly impressed, more lightly so towards apex, fifth entire, lightly impressed, sixth very faintly impressed, seventh obsolete; interstices depressed, ninth punctate, the punctures widely interrupted in middle; lateral border fine, reflexed; basal border curved behind on each side; marginal channel widened a little before the apical sinuosity. Prosternum truncate and bordered on base; episterna finely rugulose. Ventral segments obsoletely and very finely punctulate.

Length 11.5, breadth 4 mm.



*Ha*ʷ.—Gascoigne River District, W.A. (Given to me by Mr. C. French.)

A more sombre-coloured species than usual in the genus, the black having a piceous tinge; in this resembling *R. bovilli*, Blkb., but differing decidedly from that species in its smaller size, more depressed form, differently shaped prothorax with rectangular basal angles, and less strongly striate elytra, &c. From *R. miser*, Chaud., which is about the same size, it may be distinguished by its colour, shorter and more depressed prothorax, more depressed and less strongly striate elytra, &c. I cannot indicate the differences between *R. nigellus* and *Feronia arnheimensis*, Casteln., but consider there is no possibility of their being identical.

#### RHYTISTERNUS GIGAS, n.sp.

♂. Oblong, robust; prothorax transverse, a little narrowed and sinuate on each side towards base, wider across base than apex; elytra convex, strongly striate (seventh stria only, obsolete towards base), interstices strongly convex; prosternal episterna smooth (obsoletely subrugulose under a lens).

Black, shining; palpi reddish, tarsi piceous. Head large, smooth; front with two short lightly divergent impressions, and behind each of these another light foveiform impression; front convex between impressions; clypeal suture lightly marked; clypeus strongly declivous to labrum; eyes convex, lightly set in orbits at base. Prothorax subquadrate, transverse (4.4 × 6 mm.), depressed on disc, roundly declivous to sides anteriorly; disc faintly transversely striolate; sides rounded on anterior three-fourths, narrowed to anterior angles, lightly narrowed posteriorly, almost straight, but not the least out-turned before base; anterior margin widely and lightly emarginate; base sinuate, truncate (hardly oblique) on each side of peduncle, lightly emarginate across peduncle (this median emargination nearly truncate); anterior angles rounded, very lightly advanced; basal angles rectangular, obtuse at summit; lateral border thick, reflexed; median line lightly impressed; two separate lateral basal impressions on each side, both attaining base; the interior rather wide,

elongate, linear at bottom; the external shorter, wide, straight, well defined; space between internal basal impressions depressed, slightly convex, defined anteriorly by a light arcuate transverse impression; space between external impression and lateral border convex and bearing at its base the posterior marginal puncture. Elytra oblong, wider than prothorax ( $12.5 \times 7.3$  mm.), subparallel on sides, truncate on base, convex; sides shortly and decidedly narrowed to base; apical curve lightly and widely sinuate on each side; striae simple, deeply impressed, sixth not attaining basal border, seventh strongly impressed on apical third, becoming obsolete towards base; six inner interstices strongly convex for their whole length; seventh and eighth separately convex on apical third, becoming united towards base; ninth narrow, convex, ocellate-punctate along course of eighth stria, the punctures closely placed near shoulder, a single widely separated one at about anterior third, eight irregularly separated ones on apical half; lateral border strongly reflexed; basal border with posterior margin almost straight (hardly curved) on each side, a short lightly upturned projection at humeral angle; marginal channel narrow behind shoulder, becoming wider to apical sinuosity. Prosternum rounded on base, not margined; episterna almost levigate, obsoletely rugulose. Ventral segments smooth; second and third obsoletely punctulate laterally near the posterior trochanters; a narrow convex raised space along anterior margin of three last, giving them a widely transversely impressed appearance.

Length 20, breadth 7.3 mm.

*Hab.*—North Queensland, Gulf of Carpentaria. (A single specimen given to me by Mr. C. French.)

A very distinct species and the largest of the genus. It is thoroughly differentiated from all the described species of the genus by the strong convexity of the six inner elytral interstices, and the almost absolutely smooth prosternal episterna, on which, however, a slight wavy rugulosity is discernible with a lens. It is the only *Rhytisternus* known to me with dentate humeral angles.

## RHYTISTERNUS CARPENTARIUS, n.sp.

Elongate-oval, sub-depressed; prothorax transverse, quadrate-cordate, sinuate on each side towards base, wider across base than apex; elytra with five inner striae strongly impressed, the interstices convex.

Black, shining; tarsi, palpi and two basal joints of antennae reddish-piceous. Head moderate, smooth; frontal impressions short, deep, clearly defined, arcuate, strongly divergent backwards; clypeal suture strongly marked, clypeus strongly and evenly declivous to labrum; eyes convex. Prothorax short, transverse ( $3.3 \times 4.8$  mm.), widest a little before middle, lightly convex anteriorly, depressed posteriorly; disc faintly transversely striolate; sides rounded on anterior two-thirds, shortly narrowed to anterior angles, lightly narrowed behind, straightened to meet the base almost at right angles; anterior margin widely emarginate; base lightly sinuate, hardly emarginate across peduncle, sloping lightly forward on each side; anterior angles wide, very lightly advanced; basal angles subrectangular, obtuse at summit, lateral border thick, lightly reflexed; median line lightly impressed; two lateral basal impressions placed in a wide depression on each side; the internal short, strongly marked; the external much shorter, equally impressed; space between internal basal impressions depressed but convex, that between external impression and lateral margin convex and bearing at its base the posterior marginal puncture. Elytra oblong, wider than prothorax ( $10 \times 6$  mm.), subparallel on sides, lightly convex, a little depressed on disc, strongly declivous to sides; apical curve widely but decidedly sinuate on each side; striae simple, five inner ones strongly impressed, entire; fifth lightly flexuous towards base; sixth strongly impressed near apex, its course plainly discernible and crenulate on basal two-thirds; seventh strongly impressed near apex, its course faintly discernible and crenulate on basal two-thirds; eighth strongly impressed; five inner interstices lightly convex (fifth less so than others), more decidedly so and narrower on apical declivity, sixth, seventh and

eighth decidedly separated at apex, ninth punctate as usual in genus; lateral border narrow, reflexed, basal border lightly curved on posterior margin, not dentate at shoulders; marginal channel becoming wider towards apical sinuosity. Prosternum not margined at base; episterna strongly rugulose. Ventral segments smooth (hardly obsolete rugulose); first with a few punctures along anterior margin.

Length 16-18, breadth 6.6-7.5 mm.

*Hab.*—North Queensland. (Several specimens sent by Mr. C. French as coming from the Gulf of Carpentaria.)

This species is allied to *R. liopleurus*, Chaud., but is easily distinguished by its wider and more depressed form, the prothorax proportionately wider and much more strongly rounded on the anterior part of the sides, the elytra more strongly striate with the interstice more convex—the fifth stria and interstice are hardly less developed than those nearer the suture, while in *R. liopleurus* the fifth stria and interstice are both very feeble.

#### Genus DARODILIA.

##### DARODILIA MACILENTA, n.sp.

Elongate narrow, depressed; body shortly pedunculate; prothorax cordate; elytra oblong, 4-striate on disc, smooth towards sides; prosternal episterna feebly longitudinally rugulose; labrum deeply emarginate; mandibles long, hooked, decussating.

Black, shining; undersurface, legs and antennæ piceous; tarsi and palpi reddish. Head long, smooth, convex; clypeal suture distinctly impressed, a fine puncture towards each extremity; clypeus smooth; eyes convex, deeply set in orbits at base; orbits not protuberant behind eyes. Antennæ filiform, long, lightly compressed, a little thicker to apex. Prothorax as long as broad (2.3 × 2.3 mm.), narrowed to base, evidently narrower across base than apex, truncate in front and on base above peduncle, subdepressed, evenly and very lightly convex; sides lightly and continuously rounded from apex to base; basal

angles rounded, not marked; lateral border narrow, equal; median line obsoletely impressed; two clearly marked linear impressions on each side of base near basal angles, the external very short, the inner a little longer; posterior marginal seta placed a little before the base at extremity of marginal channel. Elytra oblong, a little wider than prothorax ( $4.5 \times 2.6$  mm.), depressed, abruptly roundly declivous to sides, strongly declivous to apex; sides subparallel (very lightly rounded); base subtruncate, very lightly emarginate; shoulders rounded, hardly advanced; apex strongly sinuate on each side; four inner striae strong, entire, simple, fifth, sixth and seventh wanting (seventh indicated on apical declivity), eighth strongly impressed; four inner interstices convex; lateral interstice punctate on basal and apical third; lateral border narrow; basal border weak, curved on posterior margin; marginal channel narrow. Prosternum truncate and margined at base; episterna with a few feeble longitudinal rugae towards inner margin. Metasternal episterna narrowly elongate. Ventral segments smooth in middle, transversely sulcate. Legs light; posterior tarsi sulcate externally; posterior trochanters impunctate; ♂ with three basal joints of anterior tarsi lightly dilatate and squamulose below.

Length 8, breadth 2.6 mm.

*Hab.*—Darling River, N.S.W. (Brought from the Darling River by Mr. R. Helms, probably from the neighbourhood of Bourke.)

This species is closely allied to *D. castelnavi*, Macl., but having compared it with Sir William Macleay's type, I am able to state with certainty they are distinct. From *D. rugisternus*, Sl., it may be distinguished easily by its narrower and more depressed form, proportionately longer prothorax, and the feeble rugosity of the prosternal episterna.

#### DARODILIA RUGISTERNUS, n.sp.

Elongate-oval, robust; body shortly pedunculate, elytra ovate, convex, strongly 4-striate on disc, smooth towards sides;

prosternal episterna strongly longitudinally striolate; labrum deeply emarginate; mandibles long, hooked, decussating.

Black, shining; undersurface piceous, legs reddish-piceous, antennæ and palpi ferruginous. Head large, smooth, convex; clypeal suture impressed, a fovea towards each extremity; clypeus slightly rugulose; eyes convex, prominent, deeply set in orbits at base; orbits not protuberant behind eyes. Antennæ filiform, long, compressed, thicker towards apex. Prothorax transverse ( $1.8 \times 2.1$  mm.), narrowed to base, evidently narrower across base than apex, lightly emarginate in front, truncate on base above peduncle; lightly and evenly convex; sides strongly and continuously rounded from apex to base; anterior angles obtuse, hardly advanced; basal angle rounded, not marked; lateral border narrow, even; median line very lightly impressed; two short, narrow oblong foveæ on each side of base near basal angles; posterior marginal setigerous puncture placed a little before the base at extremity of marginal channel. Elytra oblong, truncate on base, very little wider than prothorax ( $3.8 \times 2.3$  mm.), convex, strongly declivous to apex; sides subparallel in middle, rounded to base; shoulders widely rounded; apical curve short, hardly sinuate on each side; four inner striæ strong, entire, simple, fifth very lightly impressed throughout its whole length, sixth and seventh wanting (seventh indicated on apical extremity), eighth strongly impressed; four inner interstices convex, fifth flat; lateral interstice punctate on basal and apical third; lateral border narrow; basal border narrow, curved on posterior margin; marginal channel narrow. Prosternum narrowed on each side of base, basal border obsolete; episterna strongly longitudinally striolate on inner half. Metasternal episterna narrow, elongate. Ventral segments smooth in middle, transversely sulcate. Posterior trochanters impunctate.

Length 6.25, breadth 2.3 mm.

*Hab.*—Queensland. (Given to me by Mr. D. Best of Melbourne, as coming from Queensland, most probably from the Rockhampton District.

Speaking from memory, I should say this species has a great resemblance to, and is perhaps congeneric with *Meonis ovicollis*, Macl. ; but I have not been able to compare it with the type of that species which unfortunately is not described, Sir William Macleay's notice of it being merely an indication of some differences between it and Castelnau's species *Meonis ater* and *niger*.

#### Genus CYCLOTHORAX.

I believe Dr. Sharp has placed *Cyclothorax* in the tribe *Feronini*, but it is evident this is not its true position, which cannot be far from *Amblyterus* or from the Australian *Carabide* which Count de Castelnau has referred to the genus *Drimostoma*. In the present system of arranging the *Carabide* the mandibles with a seta in the anterior part of the scrobe will exclude it from the *Feronini*, while the margin of the elytra interrupted posteriorly and with an internal plica will prevent its coming into the tribe *Pogonini*, to which it has an affinity. I am not sure that it can be admitted into any of the recognised tribes of the *Carabide*.

#### *Table of the Species of Cyclothorax known to me.*

I. Disc of prothorax smooth, without punctures except near basal margin.

A. Prothorax short, strongly rounded on sides, with a wide lateral border.

Elytra black.....*C. ambiguus*, Erichs.\*

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\* A species of *Cyclothorax* is found everywhere in south-eastern Australia (N.S.W. and Victoria) where I have collected, and is also reported by the Rev. Thos. Blackburn to occur generally in South Australia (*vide* P.L.S.N.S.W. 1891 (2), vi. p. 481). It is subject to considerable variety in size, in the character of the puncturation of the elytral striæ, and in the depth of the black colour of the upper surface ; I believe it to be identical with *C. ambiguus*, Erichs., and that *C. lophoides*, Chaud., is also founded on it. I do not feel confident that *C. punctipennis*, Macl., is a distinct species from *C. ambiguus*, though it is quite likely that it is.

- Elytra black on disc, with wide testaceous margin.....  
 ..... *C. lateralis*, Casteln. †
- B. Prothorax cordate, border narrow, basal angles not prominent.....*C. peryphoides*, Blkb. ‡
- C. Prothorax short, border not wide, basal angles rectangular.  
 Elytra with the striæ formed of rows of punctures becoming obsolete on apical declivity; median line of prothorax lightly impressed.....*C. fortis*, Blkb.
- Elytra with strong punctate striæ extending to apex; median line of prothorax deeply impressed.....*C. curtus*, Sl.
- II. Disc of prothorax entirely covered with a strong puncturation, size very small .....*C. punctatus*, Sl.

CYCLOTHORAX CURTUS, n.sp.

Oval, robust, convex; elytra strongly punctate-striate.

Black; legs and antennæ reddish. Head short, convex, impressed on each side between eyes; impressions divergent behind. Prothorax transverse (1 × 1.4 mm.); base and apex equal in width; sides evenly rounded; base wide, lightly oblique on each side to basal angles, these strongly marked, rectangular; lateral border narrow, reflexed, very shortly sinuate just before the base, meeting the base at right angles; median line strongly impressed; a broad deep punctate fovea on each side of base; the space between these foveæ convex, impunctate. Elytra wide (2.2 × 1.75 mm.), convex, 9-striate; striæ deeply impressed on disc, extending to apex, not reaching base (seventh lightly impressed), strongly

† A species of *Cyclothorax* which I have taken in New South Wales at Mulwala, on the Murray, and near Urana, agrees so well with the description of *Phorticosomus lateralis*, Casteln., that I have no hesitation in regarding it as that species. *C. cinctipennis*, Blkb., seems to me certainly the same species.

‡ Specimens of a *Cyclothorax* are in my collection which apparently cannot be differentiated from *C. peryphoides*, Blkb., unless by the testaceous colour of the legs, a character that is not likely of specific value; a variety with the apex of the elytra testaceous also occurs. It is a widely distributed species; I have specimens from the following localities:—Victoria: Ferntree Gully, Lillydale. N.S.W.: Mulwala, Urana District, Windsor (Lea), Clarence River (Lea).



punctate, the puncturation lighter posteriorly; the scutellar striole very short; eighth interstice subcostate behind.

Length 4, breadth 1.75 mm.

*Hab.* Bendigo, Victoria. (A single specimen in my collection received from Mr. W. W. Froggatt, who took it at Bendigo.)

This seems a very distinct species; the absence of puncturation across the middle of the prothorax near the base seems in itself to separate it from all other described species; it is probably more allied to *C. eyrensis*, Blkb., than to any other known species.

#### CYCLOTHORAX PUNCTATUS, n.sp.

Oval, robust, convex; prothorax strongly punctate; elytra punctate-striate.

Reddish-brown, femora yellowish. Head strongly impressed on each side between eyes; three strongly impressed punctures on each side a little behind frontal impressions; eyes prominent, globose. Prothorax transverse (0.75 × 1.15 mm.), widest and dilatate a little before middle, shortly and decidedly narrowed in front, more gently narrowed behind; base evidently wider than apex, oblique on each side near angles; anterior angles not marked; basal angles prominent; lateral margin narrow, hardly reflexed, median line wanting, whole upper surface covered with strong punctures; fovea near each basal angle lightly marked, wide. Elytra broad (1.75 × 1.4 mm.), convex; five punctate striae on disc of each elytron; sutural stria entire, others obsolete on posterior declivity; lateral declivity smooth; margin as usual in genus. Prosternum with episterna thickly and strongly punctate; mesosternal episterna punctate, short, wide; metasternum (with episterna) punctate.

Length 2.9, breadth 1.4 mm.

*Hab.*—Urana District, N.S.W.

A thoroughly distinct species, nothing resembling which has hitherto been described; its small size and the strong puncturation of the whole of the pronotum and nearly all the under thoracic parts show it to be thoroughly *sui generis*. I have found it in considerable numbers under logs and the leaves of fallen saplings

at a place about twenty-five miles north-west from the town of Urana. It is sluggish in its movements.

### PLATYNINI.

#### PLATYNUS COOKI, n.sp.

Elliptic-oval, depressed; prothorax lightly transverse, widely margined; elytra much broader than prothorax, lightly striate, three foveiform punctures on each elytron, the anterior on course of third interstice, the two hinder ones on course of second stria.

Olive-black; undersurface piceous, legs light brown. Head smooth; front longitudinally and widely impressed on each side, the impressions extending to the clypeus: clypeal suture lightly marked; eyes very convex and prominent. Prothorax transverse (1.2 × 1.6 mm.), widest a little before the middle, evidently wider across base than apex; basal part a little depressed; sides rounded; anterior margin truncate; base truncate above peduncle, cut obliquely forward to angles on each side; basal angles marked, but obtuse; border wide, reflexed, widest and prominent at basal angles; a wide fovea on each side of base; median line strongly impressed, reaching base; marginal punctures as in *P. marginicollis*, Macl. Elytra ovate (4 × 2.7 mm.), base emarginate in middle with shoulders roundly and widely advanced; apical curve strongly sinuate on each side; striae simple, entire, fifth more strongly impressed near apex, sixth more strongly impressed near base; striole at base of first interstice long; interstices flat, first narrow; three strong foveiform punctures on each elytron, anterior on basal third on course of third stria, intermediate about middle on course of second stria, posterior about half way between the intermediate one and apex on course of second stria; ninth interstice strongly punctate along course of eighth stria; border reflexed. Ventral segments smooth.

Length 6.5, breadth 2.7 mm.

*Hab.*—Queensland; King's Plains Station, 28 miles south-west from Cooktown. (Sent to me by Mr. N. H. Gibson.)

A distinct species; its small size and the large foveæ of the third interstice of the elytra are among its most marked characters.

## HELLUONINI.

### LESTIANTHUS, n.gen.

*Head* constricted posteriorly to a short wide neck; vertex and front strongly punctate; some long hairs behind each eye.

*Mandibles* stout, short, pointed but hardly hooked at apex.

*Maxillæ* with inner lobe falcate, strongly bent inwards towards apex and acutely pointed; inner margin fringed (not thickly) with strong bristles; outer lobe biarticulate.

*Labrum* truncate, sexsetose.

*Labium* small, triangular, coriaceous; ligula bisetose, the setæ strong, short, placed near each anterior angle; paraglossæ large, connected behind, truncate in front, hardly advanced before ligula, each equalling ligula in width on anterior margin.

*Mentum* deeply emarginate, without a median tooth.

*Palpi*: maxillary with penultimate joint short, conical; the apical joint long, elliptical, thick, obtuse, rather more than a half longer than penultimate; labial with penultimate joint bisetose; apical joint large, very widely securiform.

*Antennæ* short, thick, subfiliform, lightly incrassate; all the joints setose; the three basal ones more sparsely so; four basal joints cylindrical; seven succeeding ones a little compressed, subequal; first joint hardly as long as two succeeding ones together, having a puncture in front on apical third bearing a long strong seta; second joint a little shorter than third, thickened at apex; apical joint a little longer than penultimate.

*Prothorax* not much broader than long, convex, punctate; a very prominent, acute angular projection on each side a little before the base.

*Elytra* connate, abbreviated at apex, striate; the interstices depressed, punctulate; a few scattered setæ towards sides and base.

*Prosternum* punctate, narrow, not impressed between coxæ.

*Legs* (♂) stout; femora having scattered hairs over their surface; anterior thick, not channelled below; anterior tibiæ strongly notched on inner side, tarsi short; a few hairs on upper surface; anterior lightly dilatate, not squamulose below, fourth joint small, transverse, hardly emarginate; unguis finely serrate; posterior coxæ divided.

The species on which this genus is founded might perhaps be more correctly placed among the *Lebiini*; but it has altogether the appearance of a Helliunide and seems to me, although the labium is coriaceous, to be more in its natural position as placed above. It is such a distinct species in many ways that it can hardly be confused with any of the previously described Australian *Truncatipennes*.

LESTIANTHUS SCULPTURATUS, n.sp.

Small, robust; elytra depressed; head, prothorax and elytra punctate and bearing numerous scattered long hairs; head constricted posteriorly to a short neck; prothorax with a strong acute projection on each side a little before the base; elytra striate.

Uppersurface of a very dark blue colour, hardly metallic (elytra dark violet); undersurface black, shining; mesosternum, metasternum and coxæ piceous; femora, tarsi and antennæ darker than coxæ; tibiæ testaceous, with base and apex piceous. Head large, punctate; occiput smooth; front obsoletely bi-impressed; eyes deeply set in orbits, not prominent; orbits swollen behind eyes; the post-ocular processes as large as the eyes but less prominent, covered with long hairs. Mandibles short, projecting but little beyond labrum. Prothorax convex, punctate, a little broader than long (1 × 1.3 mm.), widest before the middle; sides lightly rounded anteriorly, strongly sinuate posteriorly to form the strong angular projection on each side in front of the base, not oblique behind these projections and meeting the base at right angles; anterior margin lightly and widely emarginate; anterior angles obtusely advanced; base truncate; lateral margin wide; lateral

border reflexed, not reaching base, forming at its posterior extremity the strong acute dentiform ante-basal projection; these projections truncate behind; median channel deeply impressed. Elytra broad, short ( $2.75 \times 2$  mm.), roundly emarginate behind peduncle, abbreviated (very lightly rounded) at apex; sides lightly rounded; shoulders rounded; striæ strongly impressed, striole at base of first interstice short, oblique; interstices depressed, closely punctulate, the puncturation shallow, deeper and closer on the lateral interstices; border extending from near scutellum to apex, reflexed from humeral angle to apical curve.

Length 4.75, breadth 2 mm.

*Hab.*—Lillydale, Victoria. (Two specimens occurred to me in a dry situation, on the ground, under bark and débris near the foot of a large tree on 20th Nov., 1892.)\*

#### BRACHININI

##### PHEROPSOPHUS MACLEAYI, n.sp.

Robust; prothorax a little broader than long; elytra much wider than prothorax, truncate at apex, costate, the spaces between the costæ flat.

Head yellow with a triangular black spot on vertex, mandibles brown; prothorax yellow, anterior margin, posterior margin and a connecting median vitta black, underparts black along posterior margin, the black extending forward on each side along inner sutures of episterna to anterior margin; elytra black, lateral margin (including inflexed part), apical margin, a spot near each humeral angle and a broad fascia at about middle of length extending from each margin almost to the suture yellow; under parts of body piceous inclining to yellow in middle; legs and antennæ testaceous. Head large, convex, lightly bi-impressed between the antennæ; occiput finely rugulose. Prothorax a little broader than long ( $2.7 \times 3$

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\* Mr. G. Masters has, while this was passing through the press, sent me a specimen labelled "Ropes Creek, N.S.W."; it is of a greener colour than my type.

mm.), lightly convex; a few punctures and setae on disc; sides lightly rounded on anterior three-fourths, straight posteriorly and meeting the base at right angles; anterior margin truncate; base subtruncate, the middle a little produced backwards; basal angles rectangular, obtuse; lateral border reflexed; median line strongly impressed. Elytra greatly wider than prothorax ( $8 \times 5.3$  mm.), lightly convex, a little narrowed to base; shoulders rounded, apex truncate; eight narrow costae on each elytron; space between eighth costae and lateral border wide; lateral border reflexed. Underparts of prothorax and body setose.

Length 11.5-13, breadth 4.7-5.3 mm.

*Hab.*—Northern parts of Australia. (King's Sound, W. W. Froggatt; Gulf of Carpentaria, on the authority of Mr. French).

This species was originally brought from Derby by Mr. W. W. Froggatt, but the late Sir William Macleay in going through the *Carabidae* from King's Sound did not consider it presented sufficient differences from *Ph. verticalis*,\* Dej., to justify its being recognised as a distinct species; it may also be the variety of *Ph. verticalis*, from Cooper's Creek, mentioned by Count de Castelnau with "a yellow humeral spot"; † to me it seems a thoroughly distinct species. Apart from its colour and smaller size, the narrower prothorax, less strongly rounded on the anterior half of the sides, is the decidedly different character that I notice between the two species; a comparison of all the specimens of both species in my possession seems to indicate this as a constant difference, and one that is readily seen when the two species are compared. The amount of black on the prothorax varies in different specimens, and the yellow spots on the elytra at each shoulder also vary a little in size; the shape of the fascia across the middle of the elytra is constant in the three specimens before me; it is produced both forwards and backwards at the fifth costa.

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\* See P.L.S.N.S.W., 1888 (2) III, p. 451.

† Trans. Roy. Soc. Victoria, 1868, VIII, p. 109.

## HARPALINI.

## GNATHAPHANUS RIVERINÆ, n.sp.

Robust, parallel; prothorax subquadrate; elytra striate, the interstices lightly convex, third with six or seven punctures; mentum with median tooth feebly developed.

Elytra blackish-green (often with a brassy tinge); head, prothorax, undersurface and legs black. Head smooth, convex; front with a light punctiform impression on each side; clypeal suture lightly marked between the frontal impressions, eyes convex. ♂. Prothorax subquadrate ( $3.25 \times 4$  mm.), widest about middle, hardly at all narrowed behind, wider across base than apex, smooth, lightly convex; sides lightly rounded, more decidedly and roundly narrowed to anterior than to basal angles; anterior margin emarginate; base subtruncate; anterior angles prominent, very obtuse; basal angles broad, not marked; border narrow, wanting only on middle of anterior margin, reflexed on sides; posterior foveæ well marked, about half way between median line and margin; median line very lightly impressed. Elytra very little wider than prothorax ( $7.75 \times 4.5$  mm.), subparallel on sides, lightly convex; base truncate; apical curve obsoletely sinuate on each side; striæ deep, simple; striole at base of second interstice strongly impressed, elongate; interstices convex, third with six or seven widely placed punctures along its course from just behind striole of second interstice to near apex, these punctures more closely placed on posterior half; ninth interstice punctate as usual in genus.

♀. With interstices of elytra hardly as convex as in ♂, but not differing otherwise except sexually.

Length 13, breadth 4.5 mm.

*Hab.*—N.S.W., Urana District, (Sloane); Tamworth (Lea); (I find it in considerable numbers, 20 miles N.E. from Urana during the autumn and winter.)

A distinct species.